SOCIOECONOMIC FACTORS ASSOCIATED WITH PATTERNS OF SCHOOL FISCAL POLICY IN KENTUCKY

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CHAPTER 1

THE PLAN OF THE STUDY

Introduction

This study is one of a series planned to meet the objectives of Cooperative Research Project No. 2842--"The Relationship of Socioeconomic Factors, Educational Leadership Patterns, and Elements of Community Power Structure to Local School Fiscal Policy."

The directors of this project, Professors Roe L. Johns and Ralph B. Kimbrough, of the College of Education, University of Florida, selected certain states (Florida, Georgia, Kentucky, and Illinois) for an intensive three-year study. They brought together in one design a method for investigating the interrelationships of socioeconomic factors, educational leadership, and community power structure and the relationship of these factors to elasticity of local demand for education and to local financial effort in relation to ability.

The total project will consist of a series of studies which are designed to answer the following questions:

(a) Have most school districts in selected states followed relatively consistent patterns of local school fiscal policy as measured by local effort in relation to ability and elasticity of demand for education?

(b) What socioeconomic factors are associated with effort in relation to ability and elasticity of demand?

(c) What unusual changes in fiscal policy have occurred through time in school districts in selected states?

(d) Are such factors as social power exchanges, economic changes, and changes in educational leadership activities related to changes in local school fiscal policy?

(e) What relationships do the characteristics of community power structure (e.g., monopolistic, competitive, pluralistic) have with the level of local financial effort?

(f) What relationships do the characteristics of educational leadership have with observed variation in effort?

(g) How are certain socioeconomic beliefs among the population, power wielders, and teachers in selected school districts related to financial effort?

(h) Do economic beliefs have a closer relationship than educational beliefs to liberal or conservative fiscal policies among selected school districts?

This phase of the study deals with questions (a) through (c) in the State of Kentucky. Simultaneously, three other researchers, Harold H. Hopper (17), Charles R. King (37), and Walter J. Quick (48), are investigating these same questions in the States of Florida, Georgia, and Illinois, respectively. Since these studies are replicas, the same research design is employed in each.

Subsequent researchers will utilize the findings of these initial studies as a basis for investigating questions (d) through (h).

The following section provides definitions of terms which will be used in subsequent pages.

Definition of Terms

Net effective buying income.--In this study net effective buying income has the same meaning as that given in the following quote from the publication, "Survey of Buying Power" (68:54):

> Net effective buying income.--Personal income excludes the profits of business enterprises from national income in order to emphasize the distribution of income among individuals receiving either wages, salaries, profits, or property income. Then, in order to indicate how much of this income is available for the purchase of goods and services produced by these factors of production, we deduct all tax payments to federal, state and local governments. The Government calls the results "disposable personal income," which is equivalent to our definition of Net Effective Buying Income.

In Kentucky, it was considered necessary to adjust the net effective buying income figures for those counties that contained independent school districts. When population and net effective buying income figures were listed for those cities that had independent school districts, these figures were simply subtracted from the county total. This meant that different per capita net effective buying income figures had to be computed in those instances. When the desired information was not given for the independent districts, the following procedure was used:

(1) A ratio was computed between total population of the county and the average daily attendance of all the school districts of the county.

(2) The average daily attendance of the county as a school district was multiplied by the computed ratio. This

resulted in a computed population of the county as a school district.

(3) The computed population figure was then multiplied by the given per capita net effective buying income of the county. This step resulted in the computed total net effective buying income of the county as a school district.

Market value of property.--The value of property in each district, assuming it is assessed at 100 per cent of true value. The terms "market value of property" and "true value of property" are used in this study as synonomous terms.

Total local school revenue receipts.--The sum of district school revenue receipts from property, franchise, bank shares, and poll taxes. For purposes of this study, whiskey withdrawal taxes were considered to be state revenue receipts. No revenue from state and federal governments was listed as local school revenue receipts.

Effort.--In this study, effort was determined by dividing local school revenue receipts by net effective buying income for the school district for each year of the study and by equalized valuation of property for 1962.

Elasticity of local demand for education.--The term "elasticity of local demand for education" as used in this study is actually "income elasticity of local demand for education." The awkwardness of this term caused it to be shortened to elasticity of demand throughout the study.

Elasticity of demand for education, as used in this study, is the per cent change in local revenue receipts per pupil in average daily attendance (ADA) compared with a 1 per cent change in per capita income. A coefficient of 1 means that a 1 per cent change in per capita income has been accompanied by a 1 per cent change in revenue receipts per pupil. When the coefficient is more than 1, the demand is said to be elastic, and when less than 1, inelastic.

The formula for obtaining a measure of elasticity of local demand for education is given in a later section.

Financial ability.--The ability of each school district to provide for its pupils is measured by the aggregate of personal net effective buying income for each year in the 1945-1962 period. Financial ability based on the true value of property is also used for the single year 1962.

It is recognized that equalized or market value of property might be a better measure of ability where property taxes are the main source of revenue. However, data were not available in Kentucky for all of the eighteen years under study.

Justification for the use of personal income as a measure of ability was found in a study made by the Advisory Commission on Intergovernmental Relations (1:13):

> Analyses of the fiscal capacity of governmental jurisdictions conventionally center on the personal income of their population. This is understandable because, in the long run, taxes, certainly most of them, are paid out of income. We recognize that this is not invariably true in the short run, for people and businesses occasionally

> dip into capital for all kinds of purposes, including taxes. Deficit enterprises number in the millions, in good and bad years, and some of their taxes, e.g., property taxes, are affected by the condition of their profit position only very slowly, if at all. Families, too, occasionally live in part on capital and pay taxes from capital funds. But, in the long run, taxes are normally paid out of income.

Since this is a long-term study, the above reasoning should apply. Peterson (47:258) had this to say on the use of effective buying income:

> Personal income tax paid is the most adequate of the present measures of wealth available from public records. The two factors which provide the most comprehensive profile of school district wealth have their highest correlation with personal income tax paid. Effective buying income (available nationally from estimates by Sales Management, "Survey of Buying Power") and equalized valuation of residential property were also found to have high correlations with these two factors.

James (18), however, cited studies which disagreed with this position in that low correlations were found between income measures of ability and property measures of ability. The present study in Kentucky seems to corroborate Peterson's findings, as will be shown later.

Socioeconomic factors.--The term socioeconomic factors, as used in this study, includes such factors as the following: total population, age of population, educational level of the population, income level, urbanization, occupation, school attendance, racial composition, and state and federal financial assistance. The socioeconomic factors used in this study are listed in Section IX of Statistical Procedures at the end of this chapter.

Patterns of school fiscal policy.--Patterns of school fiscal policy, as used in this study, are described in terms of local financial effort and elasticity of demand for education.

Hypotheses

The following hypotheses are tested:

(1) Most of the school districts selected have followed relatively consistent patterns of financial effort and elasticity of demand over a period of years.

(2) Changes in fiscal policy are associated with a number of socioeconomic factors.

Delimitations

Only school districts of 20,000 or more persons are included in this study. Conclusions are restricted to the selected districts. Table 1 indicates the school districts in the State of Kentucky which had populations of 20,000 or more persons in 1960. Populations of independent school districts were subtracted from the county figures in order to represent the population of the county as a school district.

Related Research

Wide differences in financial ability to support schools exist among school districts, but, even when ability is held constant, Johns (22) found little research which explained differences in effort. Gentry (15) studied numerous cultural factors as they relate to effort, but could explain

TABLE 1

POPULATIONS OF SCHOOL DISTRICTS WITH 20,000 OR MORE IN 1960[a]

1.	Ashland	31,283
2.	Boone	20,410
3.	Bowling Green	38,338
4.	Campbell	23,351
5.	Carter	20,817
6.	Christian	37,439
7.	Clay	20,748
8.	Covington	60,376
9.	Daviess	28,117
10.	Fayette	69,096
11.	Floyd	41,642
12.	Greenup	25,425
13.	Hardin	58,148
14.	Harlan	46,930
15.	Hopkins	32,670
16.	Jefferson	209,138
17.	Kenton	47,019
18.	Knox	22,047
19.	Letcher	26,900
20.	Lexington	62,810
21.	Louisville	390,639
22.	McCracken	22,827
23.	Muhlenberg	20,899
24.	Newport	30,070
25.	Owensboro	42,471
26.	Paducah	34,479
27.	Perry	29,003
28.	Pike	63,510
29.	Pulaski	26,823

[a]Source: (73)

only 30 per cent of the effort variation using the factors he studied.

Other factors affecting expenditures have been researched. James, Alam, and Dyck (20) found that the patterns and amounts of state support had some effect on local initiative and that educational expenditures were significantly related to wealth.

Hirsch (16), relating expenditures to a measure of ability (per capita income), found that one factor varied in the same manner as the other, so that his result (elasticity of demand) was almost unity.

Hirsch thus showed the relative inelasticity of demand for education as an average for the nation, but drew no conclusions relative to the elasticity of demand for education in districts with high wealth as opposed to those with low wealth.

When Schultz (70) and Fabricant (13) showed that investment in education is positively related to increases in the national economy, one can see the importance of finding which factors explain relatively larger investments in education.

Ross (50) listed major non-income factors that affect consumers' expenditures through 1966. Ross saw consumer expenditures for science increasing relative to disposable income. He forecast greater proportions of income for insurance, school transportation, and medical care of the very old and young.

Some of the factors Hirsch (16) felt were related to expenditure levels included:

1. Number of pupils in average daily attendance
2. Primary versus secondary school population
3. Urbanization of school population
4. Price level of goods and services
5. Income level

Hirsch (16) found that 76 per cent of the 1900-1958 variation in the cost of per pupil daily current expenditure, plus debt service, could be explained in terms of per capita personal income changes, by holding the effect of changes in the ratio of public high enrollment to all public school enrollment and the urbanization factor constant.

Using seventeen selected years between 1900-1958, Hirsch (16) found that current school expenditures were a function of the following variables:

1. Per cent of public high school enrollment relative to total public school enrollment
2. Per cent of pupils (5 to 19 years old) in average daily attendance in urban areas
3. Average annual salary for members of instructional staff
4. Number of principals, superintendents, and consultants per 1,000 pupils in average daily attendance.

These variables explained 99.8 per cent of the year-to-year variation of daily total current expenditures.

Brazer (4) used the following independent variables, relating them to current expenditures:

1. Population size of cities
2. Rate of growth of population
3. Median family income (Family incomes rather than income of "families and unrelated persons" were employed in order to eliminate what was felt to be the distorting influence in some cities of large groups of single persons.)
4. Intergovernmental revenue (most important in his study)
5. Population density
6. Ratio of employment in manufacturing
7. Number of pupils to the city's population

Brazer (4:35) was aware of the many factors which seem to cause variance in education expenditures and suggested that the differences may be due to differences in the politics, ethnic background, and culture of the population, climatic and topographical features, tax and debt limits, as well as other factors. He said further:

> Expenditures may be an increasing function of city size for cities with more than 25,000 inhabitants because of diseconomies of scale, because as the population size of the city increases more services become economically feasible or necessary, or because the population variable is associated with other factors, such as income and population density, which, in turn, account for the apparent association between per capita expenditures and city size.

Population size and ratio of employment in manufacturing did not contribute significantly to the differences

in expenditures in Brazer's study.

Population density and the ratio of the number of pupils to the city's population proved to be significant factors in explaining variations in per capita expenditures for education.

Hirsch (16) studied the period from 1900-1958, and found the income elasticity of education to be 1.09.

Fabricant (13), using 1942 data, computed a state-to-state income elasticity coefficient for the United States of 0.78.

McLoone (40) found the state-to-state elasticity of demand for education in the United States to be 0.99, using a period from 1929-1930 to 1957-1958 for study.

It is interesting to note in McLoone's study that for the period 1947-1948 to 1957-1958, the national elasticity of demand for education was 1.34, however.

Although James (19) included expenditures for higher education and capital construction, his elasticities for the period from 1946 to 1958 were relatively high and reflect, as do McLoone's later figures, a greater than proportionate increase in educational expenditures.

Brazer (4), using 1949 median family income and 1953 per capita operating expenditure data, arrived at an income elasticity of 0.73. He included as independent variables:

1. Ratio of city population to metropolitan areas' population in 1950

2. Students in average daily attendance per 1,000 of 1950 population

3. Intergovernmental revenue per capita, for education, 1953

It should be noted that Fabricant and Brazer used cross sectional data (that is, place-to-place at a given time), while Hirsch used time series data. As Burk (5) pointed out, income elasticities computed with the aid of cross section data are generally lower than those based on time series data.

Henshaw (49) found that increased state aid payments were associated with higher expenditures per pupil.

Lohnes (39) used rate of growth in enrollments and absolute size of the school system as independent variables and found that higher rates of growth in enrollment were related to higher percentage increases in expenditures. He found also that school systems with 500-1,199 pupils had greater relative increases in educational spending than did school systems that were smaller or larger.

McMahon (41), in a 1956 cross section study of state educational spending, found that the independent variables: proportion of non-whites, proportion of children not attending public schools, and the proportion of school-age children in the population, accounted for 52 per cent of the educational expenditure variance.

Shapiro (71) made a cross section analysis of expenditures among states for the years 1920, 1930, 1940, and 1950. He chose two dependent variables: one was a measure of current expenditure per pupil for public education, and one

included both public and private educational outlays. His multivariate regressions showed state per capita personal income as most important in expenditure fluctuation, especially in the South.

Miner (42) used four dependent variables: total current school expenditures per capita, total current expenditures minus state and federal aid, total current expenditures per pupil, and total current expenditures per pupil minus state and federal aid.

He found that the proportion of pupils in secondary grades and the salary of beginning teachers tend to affect total school expenditures. Miner also found that auxiliary service was the most important indicator of both local and total per pupil expenditures.

It thus becomes evident that further research is needed to throw light on the relative importance of various factors which bear upon local school fiscal policy in time and depth, and attempt to discover additional determinants of school fiscal policy.

The section following is an outline of the general procedures which will be followed in this study.

General Procedures

I. Description and analyzation of patterns

Patterns of school fiscal policy for the 18-year period, beginning with 1945, for all Kentucky school districts having a 1960 census population of 20,000 or more will be described in terms of financial effort and in terms of

elasticity of demand for education. The statistical procedures for these measures will be presented in the next section. It should be mentioned here that all county school districts in Kentucky are coterminous with the county boundaries and all independent districts lie within the city boundaries. The decision was made to include only districts of 20,000 or more in the study in order to eliminate those districts that were largely rural, as data on net effective buying income are available only for larger districts. Also, fiscal policy will be studied for an 18-year period because the year 1945 is the earliest year for which comparable data on net effective buying income are available.

II. Relationship of local effort with socioeconomic factors

The relationship of various measures of local financial effort described below to certain socioeconomic factors will be examined. A complete list of factors follows in Section IX.

The section following is an outline of the statistical procedures used in the study. In the interest of uniformity and efficiency, the formula numbers used in Research Project No. 2842 have been retained for this present study. Since all formulas used in the total project were not pertinent to this study, there will be apparent gaps in the numbering of formulas.

Statistical Procedures

In the following outline, all terms are used here as defined under "Definition of Terms."

I. Financial effort

A. Ability measures of school districts:

1. Collect net effective buying income data for each district for each year from the appropriate issue of "Survey of Buying Power," published in Sales Management.

2. Compute equalized valuation of each district at 100 per cent of true value for 1962. (This information was furnished by the Kentucky State Department of Education, Frankfort, Kentucky.)

B. Symbols used in the formulas for calculating local financial effort:

R_1 = total local school revenue receipts

W_1 = net effective buying income

W_2 = equalized valuation

E = educational effort, as derived below

C. Formulas for calculating E:

(Formula 1): $E_1 = \frac{R_1}{W_1}$ (each year, each district)

(Formula 2): $E_2 = \frac{R_1}{W_2}$ (1962 only)

D. E_1 will be utilized in graphical presentations to show the year-to-year fluctuations in local financial effort for each district.

II. Average local financial effort where E_5 and E_7 equal average local financial effort

Formulas for calculating E_5 and E_7:

1. Representing the year 1950 (to be calculated for each selected school district)

(Formula 5):

$$E_5 = \frac{R_1(1949\text{-}50)+R_1(1950\text{-}51)+R_1(1951\text{-}52)}{W_1(1949)+W_1(1950)+W_1(1951)}$$

2. Representing the year 1960 (to be calculated for each selected school district)

(Formula 7):

$$R_7 = \frac{R_3(1959\text{-}60)+R_1(1960\text{-}61)+R_1(1961\text{-}62)}{W_1(1959)+W_1(1960)+W_1(1961)}$$

III. General procedures for computing elasticity of demand

A. Symbols to be used in general formula for elasticity of demand:

D = elastitity of demand

b_{yx} = coefficient for predicting a dependent variable from an independent variable

X = independent variable

Y = dependent variable

$\bar{X}$ = mean of independent variable

$\bar{Y}$ = mean of dependent variable

B. General formula for elasticity of demand:

(Formula 9): $D = b_{yx} \cdot \frac{\bar{X}}{\bar{Y}}$

C. Formula for computing b_{yx} above:

(Formula 10):

$$b_{yx} = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}$$

IV. Procedure for computing local elasticity of demand for education for each district, for the period from 1945-1962

Symbols used:

D_1 = elasticity of demand for a school district for the period 1945-1962 (NOTE: only one figure is calculated for a school district for the entire period)

X_1 = per capita net effective buying income for a district for each year, 1945-1962, as items (X) to be summed according to Formula 10

Y_1 = Total local school revenue receipts per pupil in ADA for a district, for each year, 1945-1962, as items (Y) to be summed according to Formula 10

$\bar{X}_1$ = mean of X_1 across the 18 years, for a school district

$\bar{Y}_1$ = mean of Y_1 across the 18 years, for a school district

(The elasticity for each district is then computed by substituting the numbers for these symbols into the general formulas 9 and 10 above.)

V. Procedure for computing local elasticity of demand for education for each district for the period 1945-1954

Symbols used:

D_3 = elasticity of demand for a school district for the period 1945-1954

X_3 = per capita net effective buying income for each district for the period 1945-1954

Y_3 = total local school revenue receipts per pupil in ADA for each district for each year from 1945-1954

$\bar{X}_3$ = mean of X_3

$\bar{Y}_3$ = mean of Y_3

(The elasticity for each district is then computed, substituting the numbers for these symbols into the general formulas 9 and 10 above.)

VI. Procedure for computing local elasticity of demand for education for each district for the period 1953-1962

Symbols used:

D_5 = elasticity of demand for a school district for the period 1953-1962

X_5 = per capita net effective buying income for each district for the period 1953-1962

Y_5 = total local school revenue receipts per pupil in ADA for each district for each year from 1953-1962

$\bar{X}_5$ = mean of X_5

$\bar{Y}_5$ = mean of Y_5

(The elasticity for each district is then computed, substituting the numbers for these symbols into the general formulas 9 and 10 above)

VII. Graphing of an elasticity measure for each district for each year is accomplished in accordance with the following formula. It should be noted that this formula provides a difference elasticity, whereas the elasticities to be used in the statistical analysis are regression elasticities.

A. Symbols used:

C = difference elasticity

ΔR_3 = per cent change in total revenue receipts per pupil in ADA, from prior year

ΔW_3 = per cent change in per capita net effective buying income, from prior year

B. Formula used:

(Formula 11): $C_1 = \Delta R_3 - \Delta W_3$

VIII. Correlations and regressions for studying the effect of various socioeconomic factors on effort and on elasticity

In all cases, where using regression equations, zero order r's, partial correlation coefficients, multiple R's, standard deviations, means, and coefficients of determinations were obtained.

IX. Symbols for independent variables (two sets of values--1950 and 1960)

X_1 = average daily attendance

X_2 = per capita net effective buying income

X_3 = average daily attendance as a per cent of total population

X_4 = federal revenue receipts per pupil in average daily attendance

X_5 = state revenue receipts per pupil in average daily attendance

X_6 = per cent civilian labor force unemployed

X_7 = per cent of families with income of $10,000 or more

X_8 = per cent of population that is non-white

X_9 = population per square mile

X_{10} = per cent rural non-farm

X_{11} = per cent rural farm

X_{12} = per cent 14-17 years old in public or private schools

X_{13} = persons 25 years old and over--median school years completed

X_{14} = females 14 years and over, per cent in labor force

X_{15} = employed persons, per cent engaged in manufacturing

X_{16} = per cent 25 years and over, with four or more years college, to total population

X_{17} = median income of families

X_{18} = married couples, per cent without own household

X_{19} = per cent 65 years and over in total population

X_{20} = per cent in ADA public schools 1-12 to total population age 7-17

X_{21} = population size

X_{22} = per cent population increase over ten-year period (1940-1950, 1950-1960)

X. Summary of symbols for dependent variables:

E_2 = effort for latest year of study from Formula 2

E_5 = average effort for each school district for 1950, from Formula 5

E_7 = average effort for each school district for 1960, from Formula 7

D_3 = elasticity of demand for each district for the period 1945-1954

D_5 = elasticity of demand for each district for the period 1953-1962

R_4 = total local school revenue receipts per pupil in ADA for each district for 1960

XI. Regression equations:

A. For 1950:

(Formula 13): $E_5 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

(Formula 15): $D_3 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

B. For 1960:

(Formula 17): $E_2 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

(Formula 18): $E_7 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

(Formula 20): $R_4 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

(Formula 21): $D_5 = a+b_1x_1+b_2x_2+b_3x_3 \ldots$

XII. Multiple correlations:

Calculate the multiple R's for Formulas 13-21. Use the multiple R which has the largest number of significant regression coefficients.

XIII. Simple or zero-order r's:

Calculate the zero order r's of each variable with each other variable for Formulas 13-21.

XIV. Coefficients of separate determination:

Calculate the coefficient of separate determination for each significant independent variable in Formulas 13-21.

XV. Other calculations:

Calculate the standard deviation and mean for each variable in Formulas 13-21.

The statistical procedures are explained in greater detail in the following chapters.

CHAPTER 2

FISCAL PATTERNS OF LOCAL SCHOOL DISTRICTS AS REFLECTED BY LOCAL FINANCIAL EFFORT

Revenue receipts of public schools are derived from the federal government, state government, local school districts, and sometimes intermediate school districts. Furthermore, schools sometimes receive gifts and non-revenue receipts from such sources as sale of property and payments from insurance companies (21, 24, 43). In this chapter, we are concerned only with local tax effort to finance education. Therefore, the fiscal analyses presented in this chapter are based upon revenue receipts from local tax sources in relation to two measures of local taxpaying ability. Those two measures are the market value of taxable property and net effective buying income.

In Kentucky, four sources of local revenue receipts are available. These are: (1) property taxes, based upon assessed valuation of real and personal property, (2) franchise taxes, based upon value of corporations and utilities within the district, (3) bank shares taxes, based upon deposits and savings, and (4) poll taxes, based upon male voter registration. Not all districts use all tax sources available to them, but the average contribution to total local revenue receipts of these four sources is as follows:

property taxes--83 per cent, franchise taxes--15 per cent, bank shares taxes--1.5 per cent, and poll taxes--.5 per cent. The state reports include a tax from whiskey storage withdrawal as a local revenue receipt. This source was not included in the study because only six of the districts selected for study obtained revenue from this source. Furthermore, revenue obtained from this source does not really constitute local tax effort. A detailed listing of local revenue receipts of each school district for each year of the study is found in Tables 32 to 49 of Appendix A.

Four measurements of effort will be described and examined in this chapter. One measurement (E_1) is a time series study for each year of the study (1945-46 school year through 1962-63 school year) for each selected school district in Kentucky as previously noted. This effort figure was computed by dividing the local revenue receipts (R_1) for each selected school district by the net effective buying income (W_1) of that district. The formula is as follows:

$$E_1 = \frac{R_1}{W_1}$$

E_1 has been graphically presented in Figures 1 to 29 of Appendix B for each school district of the study. It has also been given a tabular presentation in this chapter in Table 2. A detailed presentation of net effective buying income has been made in Tables 50 to 67 of Appendix A.

The other three measures of effort (E_2, E_5, and E_7) are each cross sectional studies in that they depict the

effort made by each district for a particular year. Each will be discussed in this chapter regarding the relationship with ability to pay.

E_2 was computed by dividing local revenue receipts (R_1) of each selected school district by equalized valuation of property (W_2) of the district for the school year 1962-63. The formula for this computation is:

$$E_2 = \frac{R_1}{W_2}$$

Equalized valuation of property and other taxable sources was provided by the Kentucky Department of Education, Frankfort, Kentucky, as an estimated 100 per cent true value (35). This material may be found in Table 70 of Appendix A. Table 6 of this chapter contains the computed E_2.

E_5 represents an effort figure based upon the relationship of local revenue receipts to net effective buying income for a three-year period with the year 1950 as the middle year. The following formula was used:

$$E_5 = \frac{R_1(1949\text{-}50)+R_1(1950\text{-}51)+R_1(1951\text{-}52)}{W_1(1949)+W_1(1950)+W_1(1951)}$$

Table 5 contains a presentation of E_5 which will be discussed later in this chapter.

E_7 was computed in a manner similar to E_5, except that 1960 was used as the middle year of a three-year period. The computed effort for each district is presented in Table 5. The formula that was used is as follows:

$$E_7 = \frac{R_1(1959\text{-}60)+R_1(1960\text{-}61)+R_1(1961\text{-}62)}{W_1(1959)+W_1(1960)+W_1(1961)}$$

It was considered necessary to compute effort for a three-year period at 1950 and at 1960 in order to overcome any possible wide fluctuation in net effective buying income estimate for one year and get a more accurate estimate of effort for the above mentioned years in relation to ability. These effort figures at 1950 and 1960 were also desired for later use with certain socioeconomic factors which were available only during census years.

Although one additional measure of effort (E_3) was used in the other replica studies, it was not included here. E_3 is computed by dividing local revenue receipts less debt services (R_2) by net effective buying income (W_1). In Kentucky, debt services are not separable from current operating expenses because the bond limitations in the state are so stringent that most districts pay debt service on bonded indebtedness from current operating expenses. Others pay rent for the buildings to a building authority. Consequently, there were no means of distinguishing just how much, if any, of the local revenue receipts was actually collected for the specific purpose of paying debt services. It was noted in the Superintendent Reports (25-34) that no item of that nature was included as either revenue or non-revenue receipts of any district.

The above measures of effort will be used to attempt to answer the following questions pertaining to school fiscal policy in this chapter:

(1) Have the selected school districts in Kentucky followed consistent patterns of school fiscal policy as measured by local financial effort from 1945 to 1962?

(2) Does a comparison of local financial effort for the three-year period (1949-50-51) with the three-year period (1959-60-61) reveal any unusual changes in fiscal policy?

(3) For the latest year of the study (1962), is there a significant relationship between financial effort as measured by the ratio on income to local revenue receipts (E_1) and local financial effort as measured by the ratio of property valuation to local revenue receipts (E_2)?

Have the Selected School Districts in Kentucky Had Consistent Patterns of School Fiscal Policy as Measured by Local Financial Effort from 1945 to 1962?

As previously noted, E_1 was selected as the measure of local financial effort which would reflect school fiscal policy over the entire period of the study. E_1 was therefore computed for each year of the study for each selected school district. The result of this is found in Table 2. These figures were graphed and are found in Appendix B, in Figures 1 to 29. For comparison purposes, the median effort of the selected districts was computed for each year of the study. This was termed the Group Median Effort and appears on each graph as a dotted line.

Analysis of E_1 Patterns in Relation to Group Median

Examination of the financial effort tables and graphs

TABLE 2

[redacted]

E_1

District	1945	1946	1947	1948	1949	1950
Ashland	.933	.944	1.016	1.064	1.023	1.281
Boone	2.530	3.539	3.462	3.812	2.352	2.035
Bowling Green	.830	.886	.891	.886	.950	1.209
Campbell	.691	.827	1.005	.805	.882	.882
Carter	1.600	1.647	1.673	1.687	1.762	1.703
Christian	1.928	2.606	2.304	2.316	1.236	1.516
Clay	1.499	1.553	1.626	1.465	2.423	2.082
Covington	.784	.789	.584	.852	.969	1.038
Daviess	1.586	1.757	1.767	1.040	1.346	1.326
Fayette	1.380	1.816	2.102	1.414	1.623	1.233
Floyd	1.355	2.696	2.101	1.921	1.589	1.615
Greenup	1.454	2.999	2.117	2.155	2.101	2.066
Hardin	.766	1.044	1.163	1.184	1.158	1.160
Harlan	.634	1.010	1.212	1.115	1.116	.941
Hopkins	.848	1.164	1.161	1.252	1.301	1.417
Jefferson	1.748	1.875	2.008	1.742	1.987	2.077
Kenton	1.407	1.286	1.605	.875	1.029	1.012
Knox	1.021	1.011	.785	.760	1.229	1.179
Letcher	.851	.936	1.066	1.924	1.355	1.213
Lexington	.578	.635	.601	.910	1.095	1.177
Louisville	.584	.715	.850	1.073	1.175	1.154
McCracken	1.141	2.256	1.744	1.803	1.983	1.573
Muhlenberg	.579	1.195	.896	.961	1.180	1.294
Newport	.952	1.005	1.064	.959	.972	1.108
Owensboro	1.189	.318	.736	.926	.890	1.071
Paducah	.700	.826	.393	1.040	.765	1.206
Perry	.567	.614	.684	.843	.963	.849
Pike	1.417	2.699	2.413	2.710	2.773	2.361
Pulaski	1.018	.979	.962	1.136	1.466	1.204

TABLE 2 Continued

District	1951	1952	1953	1954	1955	1956
Ashland	1.273	1.023	1.194	1.222	1.197	1.379
Boone	2.359	1.897	2.185	2.159	2.329	2.157
Bowling Green	1.162	1.375	1.147	.937	.920	.754
Campbell	.844	.792	.930	.960	1.023	.956
Carter	1.848	1.274	1.445	1.460	1.303	1.636
Christian	1.697	1.735	1.110	.969	.532	.797
Clay	2.035	.823	.954	1.056	.989	1.044
Covington	1.034	.964	1.112	1.168	1.152	1.216
Daviess	1.314	1.493	1.852	2.026	2.076	2.283
Fayette	1.521	1.567	1.673	2.189	1.900	1.874
Floyd	1.513	.925	1.290	1.439	1.390	1.665
Greenup	2.156	.988	1.250	1.412	1.582	1.233
Hardin	.593	.592	.448	.457	.492	.370
Harlan	.949	.536	.644	.733	.695	.722
Hopkins	1.400	1.229	1.088	1.523	1.296	1.387
Jefferson	1.426	1.592	1.841	2.800	2.626	2.881
Kenton	.916	.947	1.074	1.053	1.123	.974
Knox	1.183	.778	.768	.810	.851	.867
Letcher	1.263	.957	1.070	1.104	1.240	1.275
Lexington	1.106	1.529	1.461	1.432	1.590	1.505
Louisville	1.260	1.168	1.186	1.484	1.441	1.380
McCracken	1.441	.681	1.000	1.061	1.431	1.105
Muhlenberg	1.271	1.357	1.275	1.519	1.469	1.590
Newport	1.063	.943	1.140	1.093	1.281	1.367
Owensboro	1.063	1.121	1.000	1.164	1.202	1.157
Paducah	.936	.943	.896	1.165	1.376	1.242
Perry	.858	.621	.787	.922	1.101	1.133
Pike	2.206	.903	1.211	1.452	1.623	1.601
Pulaski	1.247	1.199	1.154	1.021	1.373	1.466

TABLE 2 Continued

District	1957	1958	1959	1960	1961	1962
Ashland	1.244	1.927	1.746	1.811	1.741	1.580
Boone	2.274	2.137	1.808	1.973	1.571	1.707
Bowling Green	.908	.916	1.269	.760	.953	1.055
Campbell	.942	1.035	1.568	1.302	1.162	1.104
Carter	1.239	1.669	1.188	1.327	1.352	1.289
Christian	.610	.748	.640	.594	.623	.592
Clay	1.105	.800	.678	.850	1.096	1.038
Covington	1.188	1.390	1.198	1.411	1.583	1.432
Daviess	1.889	1.806	4.696	2.182	2.088	1.988
Fayette	2.202	2.606	2.580	2.281	1.873	2.371
Floyd	1.493	1.570	1.355	1.388	1.570	1.468
Greenup	1.277	1.995	1.748	1.753	1.653	1.590
Hardin	.368	.368	.352	.364	.409	.396
Harlan	.740	.778	.784	.708	.874	.796
Hopkins	1.332	1.448	1.283	1.748	1.708	1.484
Jefferson	2.979	3.560	3.531	2.627	2.294	2.665
Kenton	1.295	1.305	1.294	1.248	1.195	1.150
Knox	.771	.674	.572	.653	.651	.719
Letcher	1.248	1.213	1.170	1.030	1.136	1.084
Lexington	1.297	1.638	1.541	1.399	1.540	1.584
Louisville	1.409	1.516	1.431	1.388	1.545	1.377
McCracken	1.630	2.959	3.411	1.506	1.256	1.176
Muhlenberg	1.654	1.855	1.627	1.659	1.496	1.486
Newport	1.385	1.512	1.349	1.312	1.667	1.479
Owensboro	1.332	1.391	1.249	1.562	1.468	1.611
Paducah	1.235	1.284	1.436	1.708	1.693	1.509
Perry	.932	.832	.915	.752	.849	.799
Pike	1.521	1.537	1.471	1.389	1.605	1.488
Pulaski	1.288	1.067	1.053	1.073	1.168	1.024

revealed certain information regarding school fiscal policy for the studied time period. First, approximately 50 per cent of the selected school districts retained their relative position in relation to the group median through time. Fifteen school districts were consistently above, near, or below the group median and the remaining fourteen changed positions as will be described later. Second, the effort trend line showed consistent increasing, constant, or decreasing effort through time for nineteen of the twenty-nine districts. As will be pointed out later, those districts which showed changes in the effort trend had similar patterns of change.

It is evident from observation of the group median effort, that the general tendency was one of increasing effort through time. With very few fluctuations, the median effort figures increased from 1.02 in 1945 to 1.43 in 1962. Translated into income, this meant that the median income level of local revenue receipts was $1.02 per $100 of effective buying income in 1945. In 1962, it had advanced to $1.43.

As indicated above, the group analysis revealed that approximately half of the selected school districts retained their relative level of financial effort over time. Of the remainder, eight districts indicated changes which lowered their relative position in relation to the median, five districts improved their position, and one district had no discernible trend. Three districts, Carter, Floyd, and Pike,

changed from above the median to near median effort and in each case, 1952 was the year of change. Christian and Clay districts indicated an E_1 line which began well above the median effort line. In 1952, the effort line dropped below the median in Clay County where it remained throughout the remainder of the period to 1962. Christian County displayed a similar pattern, except that the year of change was 1953. Hardin, Letcher, and Pulaski showed changing trend levels which placed each below the median after a period of time around the median. Hardin changed quite early in the study. In 1951, a sudden decrease in effort placed it well below the median and its E_1 line continued to decline throughout the remainder of the period until 1962. The E_1 line of the remaining two declining counties followed the median until 1958 when a decline was observed.

Of the five districts which indicated an upward level change, all but one changed position in 1952. Lexington changed from below to above median effort, Owensboro and Paducah from below median to median, and Muhlenberg from a median effort district to above median effort. Ashland appeared to be a median effort district until 1958 when it increased effort and its E_1 line rose above the median.

It was impossible to discern any particular level pattern in McCracken County as its E_1 line fluctuated well above and well below the median effort line.

Analysis of E_1 Patterns in Terms of Direction of Trend

Inspection of Figures 1 to 29 revealed that nineteen

of the twenty-nine districts were consistent in the general trend of effort through time. Thirteen districts indicated an increasing effort pattern, five showed a decreasing effort pattern, and one was classified as having a constant effort pattern.

Five of the districts which showed a change in the trend pattern were classed as decreasing-increasing effort districts. These were Clay, Floyd, Greenup, Harlan, and Pike Counties. It is interesting to note that in each instance, the E_1 line indicated a decreasing trend until 1952 when each district began an increasing trend which continued through 1962. Kenton and Perry counties indicated the reverse of this by an increasing-decreasing trend. Kenton County had an E_1 line that increased until 1957 and Perry County showed a change beginning one year earlier in 1956.

A more complicated pattern was observed for Letcher and McCracken counties. These districts showed a decreasing-increasing-decreasing trend. Each had a decreasing trend until 1952 when an increasing pattern began. In Letcher County, another decline in effort began in 1957, while McCracken County indicated an increasing pattern until 1959.

Bowling Green had a pattern which showed an E_1 ' increase until 1952, a declining trend until 1956, and continued the remainder of the time period with an increasing pattern until 1962.

It was previously noted that the median effort line indicated a trend of increasing effort through time and that

fifteen of the selected school districts retained their relative position in relation to the median. It will be observed, however, that only eight of these fifteen were consistent in that they showed both increased effort and consistent relative position through time. These were: Campbell, Covington, Daviess, Fayette, Hopkins, Jefferson, Louisville, and Newport. All remaining districts indicated either a change in level, a change in trend, a change in both level and trend, or were classified as a decreasing effort district. It was therefore concluded that while the group median effort indicated a gradual increase in effort, the selected school districts indicated considerable diversity in effort patterns.

Fiscal Pattern Consistency in Four States

Tables 3 and 4 present a composite view of fiscal pattern consistency in the four states included in the project in terms of level in relation to the median and in terms of direction of trend. It will be noted that Kentucky had the fewest number of districts with either consistent level or trend patterns.

Does a Comparison of Local Financial Effort for the Three-Year Period (1949-50-51) with the Three-Year Period (1959-60-61) Reveal Any Unusual Changes in Fiscal Policy?

As previously stated in this chapter, E_5 and E_7 were each computed in a manner similar to E_1, excepting the years centering around 1950 and 1960 were used rather than a time

TABLE 3

LEVEL OF SCHOOL DISTRICT LOCAL FINANCIAL EFFORT (E_1) COMPARED TO THE GROUP MEDIAN EFFORT IN FOUR STATES (1945-1963)

State	Total Studied	Number of Districts with Consistent Levels				Number of Districts Which Had Changed Levels of E_1 Relative to Median
		Above Median	Near Median	Below Median	Total	
Florida	32	12	3	11	26	6
Georgia	33	11	3	8	22	11
Kentucky	29	5	5	5	15	14
Illinois	28	12	3	10	25	3
Totals	122				88	34

TABLE 4

FISCAL POLICY PATTERNS OF EACH SCHOOL DISTRICT IN FOUR STATES AS REFLECTED BY LOCAL FINANCIAL EFFORT (E_1) TRENDS

State	Total Number of Districts Studied	Number of Districts with Consistent Trends				Number of Districts with Fluctuating Patterns
		Increasing	Constant	Decreasing	Total	
Florida	32	17	1	3	21	11
Georgia	33	16	5	0	21	12
Kentucky	29	13	1	5	19	10
Illinois	28	25	0	0	25	3
Totals	122	71	7	8	86	36

series of the entire study. Because these then became two points in time, it is impossible to speak of any growth pattern. Instead, this discussion will be limited to a comparison of E_5 with E_7.

As might be expected from the previous discussion, there was an increase in median effort between E_5 and E_7. The median E_5 was 1.250 and the median E_7 was 1.430. However, a rank order correlation of E_5 with E_7 was computed as .389 which would indicate that there was considerable change in the rank order positions of the various districts. Inspection of Table 5 revealed that such was actually the situation. It was noted that twelve districts indicated a decrease in rank and each showed a decrease in effort. Fifteen districts improved their rank order positions, fourteen of which showed an increase in effort and one a decrease. Only two districts did not change their rank order positions. One was a high ranked district which increased its effort from 1950 to 1960 and the other was a low ranked district which indicated a decrease in effort.

It was therefore concluded that a comparison of E_5 with E_7 did reveal changes in local school fiscal policy.

For the Latest Year of the Study (1962), Is There a Significant Relationship Between Local Financial Effort as Measured by the Ratio of Income to Local Revenue Receipts and Local Financial Effort as Measured by the Ratio of Property Valuation to Local Revenue Receipts?

It was previously noted in this chapter that E_2 is the quotient obtained by dividing local revenue receipts by equal-

TABLE 5

AVERAGE EFFORT FOR 1950 AND 1960

District	E_5 (1950)	E_7 (1960)
Ashland	1.189	1.769
Boone	2.243	1.764
Bowling Green	1.105	.986
Campbell	.869	1.320
Carter	1.773	1.286
Christian	1.474	.619
Clay	2.169	.849
Covington	1.015	1.386
Daviess	1.343	2.573
Fayette	1.416	2.185
Floyd	1.572	1.430
Greenup	2.109	1.718
Hardin	.863	.374
Harlan	.996	.782
Hopkins	1.377	1.581
Jefferson	1.754	2.701
Kenton	.980	1.243
Knox	1.195	.624
Letcher	1.275	1.110
Lexington	1.125	1.491
Louisville	1.196	1.453
McCracken	1.620	1.702
Muhlenberg	1.250	1.591
Newport	1.046	1.436
Owensboro	1.007	1.423
Paducah	.951	1.598
Perry	.886	.836
Pike	2.422	1.483
Pulaski	1.295	1.097

ized valuation. That equalized valuation is a better measure than assessed valuation can be seen from an inspection of certain Kentucky laws and practices. The Kentucky legislature has placed certain restrictions on the local taxes that can be levied for schools. The tax limits for schools in Kentucky are as follows:

> (1) The tax rate on property may not exceed one dollar and fifty cents upon each hundred dollars of property subject to local taxation except by a vote of a majority of the people or when the rate of one dollar and fifty cents is not sufficient to meet the required local tax effort for foundation program purposes.
>
> (2) A tax on bank shares may not exceed forty cents on one hundred dollars of the fair cash value.
>
> (3) A poll tax not exceeding two dollars on each male inhabitant in the district over twenty-one years of age who is not exempt by law may be requested by the board of education. . .
>
> . . .Local assessments are determined by local elected officials except for franchise property which is assessed by the Department of Revenue. (35:1)

It should also be noted that in 1962, none of the selected school districts of Kentucky assessed at a rate greater than 40.6 (36) and that the median assessment was 31.6. Computing E_2 on the basis of assessed valuation would not, therefore, give a true picture of ability. The Department of Education provided the figures for an estimated 100 per cent equalized valuation and these figures were used as the measure of ability.

It was noted by observing Table 6 that the median E_2 was .551 with a range of .384 to .826. When this was compared with E_1 for 1962, a rank order correlation of .693 was obtained. This correlation was significant at the .01 level.

A closer examination of the rank order for E_1 and E_2 for 1962 for the districts revealed some interesting facts. The E_1 ranking for 1962 was higher than the E_2 ranking for thirteen of the districts, lower for thirteen others, and identical for three. In most instances, the rank differences were fairly small, but five districts indicated a difference of ten or more ranks. Boone, Daviess, and Muhlenberg indicated a rather low financial effort based on property value (E_2), but a relatively high financial effort measured by income (E_1). Boone showed an E_2 ranking of fourteen with an E_1 ranking of four. Daviess had a low E_2 rank of twenty-one while it ranked high in E_1 as three. Muhlenberg ranked twenty-two for E_2 and had an E_1 ranking of eleven.

Two districts showed a much higher E_2 than E_1. Campbell ranked ten in E_2 but twenty in E_1. Covington was high with a rank of four in E_2, but was a median effort district with a rank of fifteen in E_1 for 1962.

A rank order correlation between per capita net effective buying income (as a measure of financial ability) and per capita 100 per cent equalized valuation of property was computed as .637.

TABLE 6

E_2, EDUCATIONAL EFFORT FOR
1962 BASED ON TRUE VALUE OF PROPERTY

District	W_2, True Value of Property (in thousands) Column 1[a]	R_1, Total Local School Revenue Receipts Column 2[b]	E_2 Col. 1 ÷ Col. 2
Ashland	$ 165,003	$ 957,896	.580
Boone	114,531	657,250	.573
Bowling Green	186,378	586,665	.551
Campbell	103,762	616,716	.594
Carter	52,721	246,891	.468
Christian	84,501	353,488	.418
Clay	33,599	135,133	.402
Covington	215,626	1,489,327	.690
Daviess	158,233	719,463	.454
Fayette	553,944	3,922,532	.708
Floyd	103,519	505,232	.488
Greenup	51,378	308,295	.600
Hardin	95,698	387,025	.404
Harlan	72,779	291,837	.400
Hopkins	145,098	745,210	.513
Jefferson	1,789,190	14,783,546	.826
Kenton	181,388	1,068,885	.589
Knox	31,562	121,427	.384
Letcher	48,813	229,911	.471
Lexington	298,214	1,802,912	.604
Louisville	1,767,826	10,569,427	.597
McCracken	82,265	477,671	.580
Muhlenberg	74,930	338,030	.451
Newport	113,394	748,705	.660
Owensboro	192,344	1,408,810	.732
Paducah	146,981	1,011,724	.688
Perry	40,110	175,370	.437
Pike	158,002	766,598	.485
Pulaski	51,138	223,077	.436

[a] Source: (35)
[b] Source: (34)

Summary

In this chapter, an attempt was made to answer three questions as follows:

(1) Have the selected school districts in Kentucky followed consistent patterns of school fiscal policy as measured by local financial effort from 1945 to 1962?

It was noted, by comparing the level of effort of each district with the group median effort, that fifteen districts of the selected twenty-nine remained consistently above, near, or below the group median.

It was also noted that nineteen of the selected districts showed a consistent direction of effort trend throughout most of the study. Of these, thirteen showed a consistent increasing effort pattern, five indicated a decreasing effort pattern, and one was classified as having a constant effort pattern.

(2) Does a comparison of local financial effort for the three-year period (1949-50-51) with the three-year period (1959-60-61) reveal any unusual changes in fiscal policy?

For the period from 1950 to 1960, the median effort increased from 1.250 to 1.430. This indicated a general increase in effort, but a low rank order correlation of .389 between E_5 and E_7 indicated that there were many changes in rank order position. It was noted that twelve districts decreased in rank and decreased in effort between 1950 and 1960. Fifteen others increased in rank and two did not change.

(3) For the latest year of the study (1962), is there a significant relationship between local financial effort as measured by the ratio of income to local revenue receipts (E) and local financial effort as measured by the ratio of property valuation to local revenue receipts (E_2)?

In Kentucky, the correlation between E_1 and E_2 for 1962 was .693 and the correlation between per capita net effective buying income and per capita equalized valuation was .637. It was noted that only five districts changed rank of ten or more places between E_1 and E_2.

CHAPTER 3

FISCAL POLICY OF LOCAL SCHOOL DISTRICTS AS REFLECTED BY ELASTICITY OF LOCAL DEMAND FOR EDUCATION

Chapter 2 was a presentation of local school effort in relation to ability to pay for educational services. This chapter deals with the concept of elasticity of demand for education. This concept has been borrowed from economics (3, 7, 8, 14, 76). In this chapter we are concerned with the rate of increase in local per pupil revenue that accompanies a 1 per cent increase in per capita income. It is assumed that a school district with a high elasticity of demand for education is placing a greater relative value on education with the passage of time. On the other hand, if a district has a low elasticity of demand, it is assumed that the people of a district are placing a lower value on education with the passage of time. There is some relationship between measures of elasticity and measures of financial effort because a district with a high elasticity of demand is in the process of increasing its effort. Similarly, a district with a low elasticity of demand is in the process of decreasing its efforts (23, 47, 51).

Year-By-Year Measures of Elasticity

The attempt was made in this study to evaluate yearly fluctuations in school fiscal policy as measured by elasti-

city of demand for education. Two measures of yearly elasticity were used: ratio elasticity and difference elasticity. These measures are discussed in the following paragraphs.

Ratio Elasticity

In the belief that a year-by-year trend analysis could be graphed, the following formula, suggested by Blank (2), The National Bureau of Economic Research (45), and others (6, 11, 49, 72), was adapted. This formula suggested that the value of elasticity might be obtained by comparing the per cent change of the two variables as follows:

$$\frac{\Delta X / X}{\Delta Y / Y}$$

In this formula, ΔX equals the change in total local school revenue receipts per pupil in average daily attendance from one year to the next. The value of total local school revenue receipts per pupil in average daily attendance for the prior year is designated as X. ΔY is the code for the change in per capita income from one year to the next, and Y equals the value of per capita net effective buying income for the prior year.

This concept was not satisfactory for a year-by-year presentation. It was soon discovered that decreases were present in the per capita net effective buying income portion of the formula. This resulted in a coefficient which was uninterpretable due to the negative value in the denominator.

Difference Elasticity

The above mentioned difficulties led Hopper (17) to develop the concept of difference elasticity. The formula for this can be found in Chapter 1.

It was soon discovered that negative variations could be handled logically and that the resulting coefficients could be graphed on a year-by-year basis. However, the desired adaptability to trend analysis was missing and consequently this concept was useless for this study.

Samples of difference elasticity graphs can be found in Figures 30 to 35 in Appendix B. Figures 30, 31, and 32 are elasticity graphs of three high effort (E_1) districts and Figures 33, 34, and 35 are for three low effort (E_1) districts. Observation of these graphs revealed that any trends and patterns were obscured by frequent and large fluctuations. Consequently, this concept was discarded as a means for a year-by-year presentation.

Regression Elasticity

The realization that elasticity of demand for education could not be handled as a year-by-year trend analysis led to the assumption that periods of time could be compared. It was then decided to compare the elasticity of demand for education in each Kentucky district for the first ten years of the study with the elasticity of demand for the last ten years. Brazer (4), Hirsch (16), and others (9, 10, 38, 44) have suggested that the elasticity of demand can be obtained by multiplying the regression coefficient of the independent

variable by the ratio of the mean of the independent variable to the mean of the dependent variable. This was noted in Chapter 1 as follows:

(Formula 9): $D = b_{yx} \cdot \frac{\bar{X}}{\bar{Y}}$

The regression coefficient (b_{yx}) was obtained by using the following formula, also previously noted in Chapter 1:

(Formula 10): $$b_{yx} = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}$$

In these formulas, X represents per capita net effective buying income (Tables 50 to 67) and Y represents local school revenue receipts per pupil in average daily attendance (Tables 71 to 85).

The regression coefficients were obtained for each school district by utilizing Formula 10 for the following periods of time: 1945-54, 1953-62, and 1945-62. Formula 9 was then used to compute the coefficients of elasticity for each district. These were coded D_3 for the period 1945-54, D_5 for 1953-62, and D_1 for the total period of the study (1945-62).

The elasticity of demand for the first ten-year period (D_3) was compared with the elasticity for the last ten-year period (D_5). These comparisons were used to analyze trends and levels of school fiscal policy, as reflected in changes in elasticity of demand for education.

A tabulation of the elasticity coefficients for the three time periods is found in Table 7.

TABLE 7

ELASTICITY COEFFICIENTS

Districts	1945-54 D_3	1953-62 D_5	1945-62 D_1
Ashland	1.0083	1.3665	1.4145
Boone	.4189	.1327	.3950
Bowling Green	.8404	.6811	.8476
Campbell	.8209	1.0152	1.1615
Carter	.4441	1.0821	.6949
Christian	.4590	- .5194	.3258
Clay	.2477	.0644	.2506
Covington	.8714	.6328	1.2350
Daviess	.8306	1.0232	.9902
Fayette	.9533	.3672	.8644
Floyd	- .1084	.4798	- .8299
Greenup	.2916	1.2415	.6479
Hardin	.5211	- .4318	.3540
Harlan	.3985	.1549	.4296
Hopkins	1.0197	1.2562	1.0455
Jefferson	.3744	.2711	.5670
Kenton	.6161	.8280	.7936
Knox	.7960	- .1371	.5678
Letcher	1.0625	.1205	.7531
Lexington	- .4033	.3352	.7055
Louisville	3.1403	.4856	2.2119
McCracken	.3127	.0113	.6448
Muhlenberg	1.6123	.7707	1.2128
Newport	.6798	.9737	1.0320
Owensboro	.7034	1.7023	1.4740
Paducah	1.6581	.5645	1.5822
Perry	.9515	- .0119	.7522
Pike	.1949	.4892	.2865
Pulaski	1.4875	.4777	.9005
Median Elasticity	.7032	.4856	.7531

Analysis of D_3 and D_5

In order to make comparisons between D_3 and D_5, a rank order correlation was computed, range of elasticity coefficients was observed, and median elasticity was computed. The rank order correlation between D_3 and D_5 was .216 and was sufficiently low as to suggest that there was very little relationship between the elasticity coefficients of the two periods.

Several observations were made, using the median elasticities as reference points:

(1) The D_3 median was .7034 with a range of -.4033 to 3.1403 and the D_5 median was .4856 with a range of -.5194 to 1.3665. Two districts indicated a minus D_3, but four districts had a minus D_5. All this indicated a general downward trend for the state.

(2) Eight districts were ranked above the median D_3 and also above the median D_5. However, four of these districts indicated decreasing elasticity coefficients from D_3 to D_5. These were: Covington, Paducah, Muhlenberg, and Bowling Green. Four other districts remained above the median and showed an increasing trend. These were: Ashland, Campbell, Daviess, and Hopkins districts.

(3) Nine districts were below the median for the entire period of the study. Two of these, Lexington and Floyd, indicated an increasing elasticity trend while the remainder showed a declining elasticity. These were: Boone, Christian, Clay, Hardin, Harlan, Jefferson, and McCracken districts.

(4) Five districts had elasticity coefficients below the median D_3 but had elasticity coefficients above the median in the second period. They were: Carter, Greenup, Kenton, Newport, and Pike districts.

(5) The following five districts showed a movement of declining elasticity from above the median during the first period to below the median during the second period: Fayette, Knox, Letcher, Perry, and Pulaski counties.

(6) One district, Owensboro, whose elasticity coefficient in 1950 was equal to the median of the districts, had increased in rank by 1960 to show the highest D_5 of all twenty-nine districts. Louisville, on the other hand, had the highest elasticity of demand for education in 1950, but indicated an elasticity coefficient in 1960 equal to the median D_5.

The low correlation coefficient and the variety of movements around the median indicated that there were many fiscal policy changes in Kentucky. It should also be noted that seventeen districts of the twenty-nine indicated a declining elasticity, with twelve showing an increase in the elasticity coefficient.

Median D_5 Coefficients of Four States

Table 8 is included to show a comparison of the median coefficients of elasticity for the last ten years of the study for each of the four states. It can be noted that Kentucky was the only state with a median coefficient below one.

TABLE 8

MEDIAN OF COEFFICIENTS OF ELASTICITY FOR 1953-63

Florida	1.2384
Georgia	1.6609
Kentucky	.4856
Illinois	1.0251

A Composite Measure of Fiscal Policy

A composite measure of fiscal policy was developed which utilized the rankings of the districts for the three measures of fiscal policy (E_1 and E_2 for 1962 and D_5 for 1953-62). This composite scale (Table 9) presents the individual scores for E_1, E_2, and D_5 and the total score for these three measures. The less the total score, the higher the rank in effort and the larger the score, the lower the rank in effort. There was considerable range in effort ranks. For example, the total score for Owensboro was 8, Greenup was 18, and Jefferson, 22. Whereas the total score for Christian was 82, Hardin had 83 and Knox had 83.

Rank order correlations were computed between each individual measure of local fiscal policy in order to help establish the validity of the total rank score concept. The correlation between E_1 (financial effort based on net effective buying income) and E_2 (financial effort based on true value of property) was .693. The rank order correlation between D_5 and E_1 was .512 and was .396 between D_5 and E_2.

TABLE 9

RANKINGS OF SCHOOL DISTRICTS ON BASIS
OF THREE MEASURES OF EFFORT
FROM HIGHEST TO LOWEST

Districts	1962 E_1	1962 E_2	1953-62 D_5	Total Rank Score	Population Rank
Owensboro	5	2	1	8	10
Greenup	6	8	4	18	22
Jefferson	1	1	20	22	2
Ashland	8	12.5	2	22.5	15
Fayette	2	3	18	23	3
Newport	13	6	8	27	16
Paducah	9	5	13	27	13
Daviess	3	21	6	30	19
Hopkins	12	16	3	31	14
Covington	15	4	12	31	6
Lexington	7	7	19	33	5
Campbell	20	10	7	37	23
Kenton	19	11	9	39	8
Boone	4	14	22	40	29
Louisville	16	9	15	40	1
Carter	17	20	5	42	27
Pike	10	18	14	42	4
Muhlenberg	11	22	10	43	26
Floyd	14	17	16	47	11
Bowling Green	22	15	11	48	18
McCracken	18	12.5	25	55.5	24
Letcher	21	19	23	63	20
Pulaski	24	24	17	65	21
Clay	23	27	24	74	28
Perry	25	23	26	74	17
Harlan	26	28	21	75	9
Christian	28	25	29	82	12
Hardin	29	26	28	83	7
Knox	27	29	27	83	25

Summary

In this chapter, the writer examined fiscal policy as measured by elasticity of demand for the periods 1945-54 and 1953-62 and made the following observations:

(1) There was a general trend in Kentucky of a decline in elasticity of demand. The median coefficient declined from .7034 for the period 1945-54 to .4856 for the period 1953-62.

(2) Twelve of the twenty-nine selected districts showed increased coefficients of elasticity over the period and seventeen showed decreases.

(3) Four districts had negative coefficients of elasticity in 1953-62 as opposed to two negative elasticities during the first period.

(4) The rank order correlation between D_3 and D_5 was .216.

(5) In Chapter 2, it was reported that financial effort in relation to ability gradually increased in Kentucky between 1953 and 1962. It would seem impossible for Kentucky districts to have a coefficient of elasticity of demand of less than one and still have an increase in effort over the same period of time. However, this is mathematically possible if the rate of increase in average daily attendance is greater than the rate of increase of the total population. This actually happened in Kentucky between 1950 and 1960. It was computed that the rate of increase in total population of the selected school districts was 1.1 per cent per year. The

rate of increase of school age children (7 to 17) of the selected districts, however, was computed as 2.2 per cent per year.

It was therefore concluded that most districts of Kentucky did not follow consistent patterns of effort as measured by elasticity of demand for education.

CHAPTER 4

RELATIONSHIP OF SELECTED SOCIOECONOMIC FACTORS ON LOCAL FINANCIAL EFFORT FOR TWO DECENNIAL YEARS

The data presented in Chapters 2 and 3 revealed that there were wide variations in fiscal policy within the twenty-nine selected Kentucky school districts. In Chapter 1, it was generally hypothesized that variations in local effort for school finance could be explained in terms of selected socioeconomic factors. This chapter will be concerned with the influence of these socioeconomic factors on variations in local effort. The statistical method selected to test the hypothesis was the multiple regression, and the dependent variables in this chapter were E_5, E_7, and E_2.

Study of the relationship of socioeconomic factors to local effort was limited to cross sectional studies of 1950, 1960, and 1962. Data for establishing relationships for the entire time series were not available in all instances except for census years. Consequently, the relationships were ascertained on a district-to-district basis rather than a year-by-year study. An attempt was made to compare the relationships between 1950 and 1960.

The following topics are treated in this chapter:

(1) Selection of socioeconomic factors

(2) Selection of local financial effort measures

(3) The procedure of the step-wise multiple regression program

(4) The procedures used for the selection of significant regression coefficients

(5) The results of the multiple regression

Selection of Socioeconomic Factors

Although a considerable number of socioeconomic factors were available, it was discovered that only 45 were available for each of the census years 1950 and 1960. Since the number of variables should not exceed the number of degrees of freedom and only twenty-nine districts constituted the number of cases in this study, a panel of faculty members and doctoral students evaluated the proposed list. This panel used as criteria for selection the apparent relevance of the factors to school fiscal policy variations and the use of those factors in similar studies. The recommendation of the panel was to use twenty-two socioeconomic variables as worthy of statistical analysis. The twenty-two variables selected were as follows:

X_1 = average daily attendance

X_2 = per capita net effective buying income

X_3 = average daily attendance as a per cent of total population

X_4 = federal revenue receipts per pupil in average daily attendance

X_5 = state revenue receipts per pupil in average daily attendance

X_6 = per cent civilian labor force unemployed

X_7 = per cent of families with income of $10,000 or more

X_8 = per cent of population that is non-white

X_9 = population per square mile

X_{10} = per cent rural non-farm

X_{11} = per cent rural farm

X_{12} = per cent 14-17 years old in public or private schools

X_{13} = persons 25 years old and over, median school years completed

X_{14} = females 14 years old and over, per cent in labor force

X_{15} = employed persons, per cent engaged in manufacturing

X_{16} = per cent 25 years old and over, with four or more years college, to total population

X_{17} = median income of families

X_{18} = married couples, per cent without own household

X_{19} = per cent 65 years and over in total population

X_{20} = per cent in average daily attendance in public school grades 1-12 to total population age 7-17

X_{21} = population size

X_{22} = per cent population increase over ten-year period (1940-1950, 1950-1960) (74, 75)

Selection of Measures of Local Financial Effort

Chapter 2 contained descriptions of the measures of local financial effort used as the dependent variables in the effort regression equations. These were E_5, E_7, and E_2. The formulas were also provided in Chapter 1, but a brief description of each measure follows.

E_5 was designated as the effort measure for 1950. The total local revenue receipts and net effective buying income for the years 1949-50-51 were used to compute E_5 for each district.

E_7 was computed in a manner similar to E_5, excepting the data of years 1959-60-61 were used to compute effort.

E_2 was computed by using total local school revenue receipts and estimated 100 per cent true value of property for 1962.

An appropriate multiple regression equation was developed for each dependent variable, using the values of each of the twenty-nine districts. As stated above, the step-wise multiple regression method is discussed in the following section.

Step-Wise Multiple Regression Program

The 709 computer was used to compute the desired multiple regression equations. It was programmed to provide information in a series of steps, hence the name, step-wise multiple regression program. The first step provided the independent variable which had the highest simple correlation with the dependent variable and also included the following additional information:

(1) The standard error of the predicted dependent variable

(2) The multiple regression coefficient

(3) The regression equation constant

(4) The coded number of the independent variable entering Step 1.

(5) The regression coefficient of the independent variable

(6) The standard error of the regression coefficient of the independent variable.

It is understood, of course, that the computer actually made three computations before the first step of the regression equation. These computations provided the mean of each of the variables, the standard deviation of each variable, and simple correlation of each variable with each other variable. The implications of these data will be discussed in the next section.

In Step 2 of the step-wise multiple regression program, the computer was programmed to compute partial correlations with each of the remaining variables and to select the variable with the next highest partial correlation. To do this, the computer tested each variable to determine which one, combined with the previously selected variable, would most reduce the standard error predicting the dependent variable. The selected independent variable was then entered into a multiple regression with the previously selected variable. At the conclusion of this step, all the information provided in Step 1 was provided in Step 2 in addition to the second coded number, the second regression coefficient, and the second standard error of the regression coefficient.

Step 3 repeated the procedure followed in Step 2 and the program continued until all variables were examined. It should be noted here that a regression was provided at the conclusion of Step 1 and multiple regression equations were

provided for each of the steps following Step 1. The pertinence of this will become apparent as this study is developed.

Specific Procedure for Selecting a Significant Regression Result

In the previous section, it was noted that the computer made three computations before entering the first actual step of the program. These computations, the means of the variables, the standard deviations, and the simple correlations, thereby reduced the degrees of freedom by three and left twenty-six of the original twenty-nine. It had been decided that any regression coefficient that did not meet a t-test of .05, would be considered insignificant and would not be included in the study. Inspection of the t-table revealed that for twenty-six degrees of freedom, a value of 2.06 was presented for a .05 level of significance for the first step. This meant that if the regression coefficient of the independent variable was 2.06 times its standard error, it was included as being significant at the .05 level. Step 2 was then considered in a similar manner plus noting if the standard error of the predicted variable was reduced from what it had been in Step 1. If all the examinations produced positive results, then the writer proceeded with Step 3 and so on through the various steps of the program. At the point where any regression coefficient was found to be insignificant or the standard error of the predicted variable was not decreased, all inspections ceased. This means that the

desired regression equation was obtained in the last step in which all of the tests were significant.

Results of Step-Wise Multiple Regression

The multiple regression equations for E_5, E_7, and E_2 are presented in the following paragraphs.

E_5 as a Dependent Variable

Inspection of the step-wise multiple regression program using effort of each school district for the three-year period 1949-51 as the dependent variable revealed that only three of the twenty-two independent variables were significant predictors at the .05 level. The resulting multiple regression equation was:

$$E_5 = 1.16017 - .01968X_5 + .02898X_{11} + .00034X_{17}$$

Table 10 presents the intercorrelations of E_5, X_5, X_{11}, and X_{17}. The analysis of the E_5 multiple regression is found in Table 11. The formulas of the different coefficients used in Table 11 are shown in Table 12.

TABLE 10

SIMPLE CORRELATION COEFFICIENTS AMONG E_5 AND SIGNIFICANT INDEPENDENT VARIABLES

Variables	X_5	X_{11}	X_{17}
E_5	.12	.60	-.19
X_5		.66	-.39
X_{11}			-.69

Inspection of Table 10 revealed that X_{17} (median income of families) was negatively correlated with all other factors. This seemed to indicate that where the median income of families increased, effort, rural population, and amount of revenue receipts from the state decreased. Also noteworthy was the high positive correlation between X_{11} (per cent rural farm) and X_5 (state revenue receipts per pupil in average daily attendance) and E_5.

These three variables together accounted for 60 per cent of the variance of local school effort for 1950. It can be seen in Table 10 that the coefficient of separate determination of X_{11} if five times as important as the coefficients of X_5 and X_{17} combined in explaining the variance in E_5.

Table 13 contains the simple correlation coefficients between E_5 and all twenty-two variables. Table 68 in Appendix A presents the correlational matrix of all the independent variables for 1950.

E_5 as a Dependent Variable in Four States

Table 14 illustrates the significant independent variables with E_5 as the dependent variable in each of the four states in the project. It will be noted that only one variable (X_{11}) in Kentucky coincided with another state (Florida). This was not judged to be enough of a coincidence to warrent further investigation.

E_7 as a Dependent Variable

Only one variable, X_{12} (per cent 14-17 years old in

TABLE 11

E_5 REGRESSION ANALYSIS

	Variables			
	E_5	X_5	X_{11}	X_{17}
Regression Coefficient		- 0.01968	0.02898	0.00034
Standard Error of Regression Coefficient	.2901	.00623	.00486	.00013
Standard Deviation	.4477	11.5407	18.7018	595.9197
Beta Coefficient		- .53104	1.26721	.47373
Simple Correlation Coefficient with E_5		.117081	.596647	- .193535
Coefficient of Separate Determination		- .06217	.75608	- .09169
Multiple Correlation Coefficient (R)	.77669			
Multiple Correlation Coefficient Squared (R^2)	.60325			

TABLE 12

COEFFICIENT FORMULAS[a]

Beta Coefficient	= Regression coefficient multiplied by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable
Coefficient of Separate Determination	= Beta coefficient multiplied by the simple correlation between the independent and dependent variable
Elasticity Coefficient	= Regression coefficient multiplied by the mean of the independent variable, divided by the mean of the dependent variable

[a]Source: (12)

TABLE 13

SIMPLE CORRELATION COEFFICIENTS BETWEEN E_5 AND ALL INDEPENDENT VARIABLES

X_1	.083	X_{12}	-.190
X_2	-.473	X_{13}	-.378
X_3	.489	X_{14}	-.405
X_4	.067	X_{15}	-.233
X_5	.117	X_{16}	-.238
X_6	-.239	X_{17}	-.194
X_7	-.208	X_{18}	-.055
X_8	-.217	X_{19}	-.145
X_9	-.400	X_{20}	.339
X_{10}	.397	X_{21}	-.049
X_{11}	.397	X_{22}	-.086

TABLE 14

FOUR-STATE COMPARISON OF SIGNIFICANT 1950 SOCIOECONOMIC VARIABLES AS THEY PREDICT E_5 (Average Local Financial Effort for 1950, based on Net Effective Buying Income)

Variable	Coefficients of Separate Determination[a] Fla.	Ga.	Ky.	Ill.
X_2 (per capita net effective buying income)	.06(N)			.21(N)
X_3 (average daily attendance as a per cent of total population)				.57(P)
X_5 (state revenue receipts per pupil in ADA)			-.06(P)	
X_7 (per cent of families with income of $10,000 or more)	.25(P)			
X_{11} (per cent rural farm)	.19(N)		.76(P)	
X_{17} (median income of families)			-.09(N)	
X_{19} (per cent 65 years old and over in total population)		.16(N)		
X_{20} (per cent in ADA public schools to total school age population)	.11(P)	---	---	---
Total[b]	.61	.16	.61	.78

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_5.

[b]The total Coefficient of Determination = R^2.

public or private schools), was found to be significant upon inspection of the regression analysis using E_7 as the dependent variable. The result was the following regression equation:

$$E_7 = .04863\ X_{12} - 2.47694$$

The per cent of explained variance was obtained by squaring the simple correlation (.611) between the one independent variable (X_{12}) and the dependent variable. It was found that X_{12} explained about thirty-seven per cent of the fluctuation in average effort for 1960.

The simple correlation coefficients between E_7 and all the independent variables are shown in Table 15.

E_7 as a Dependent Variable in Four States

Table 16 is included to show the results of the E_7 regression equations in all four states included in the project. It should be noted that only one state (Illinois) showed more than one significant independent factor in this analysis. Furthermore, only one factor (X_5) was significant in more than one state (Georgia and Illinois).

E_2 as a Dependent Variable

The analysis of the multiple regression program using E_2 as the dependent variable revealed that only two of the twenty-two independent variables were significant predictors of E_2 variation. The resulting multiple regression

$$E_2 = .37498 + .01885\ X_7 + .00002\ X_9$$

TABLE 15

SIMPLE CORRELATION COEFFICIENTS BETWEEN E_7 AND ALL INDEPENDENT VARIABLES

X_1	.391	X_{12}	.611
X_2	.260	X_{13}	.436
X_3	.087	X_{14}	.402
X_4	.017	X_{15}	.489
X_5	-.430	X_{16}	.407
X_6	-.261	X_{17}	.577
X_7	.581	X_{18}	-.278
X_8	.082	X_{19}	.275
X_9	.154	X_{20}	.120
X_{10}	-.413	X_{21}	.239
X_{11}	-.192	X_{22}	.260

TABLE 16

FOUR-STATE COMPARISON OF SIGNIFICANT 1960 SOCIOECONOMIC VARIABLES AS THEY PREDICT E_7 (Average Local Financial Effort for 1960, based on Net Effective Buying Income)

Variable	Coefficients of Separate Determination[a]			
	Fla.	Ga.	Ky.	Ill.
X_3 (average daily attendance as a per cent of total population)				.78(P)
X_5 (state revenue receipts per pupil in ADA)		.36(N)		-.10(P)
X_{12} (per cent 14-17 years old in public or private schools)			.37(P)	
X_{19} (per cent 65 years old and over in total population)	.32(P)	—	—	—
Total[b]	.32	.36	.37	.68

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_7.

[b]The total Coefficient of Separate Determination = R^2.

TABLE 17

E_2 REGRESSION ANALYSIS

		Variables	
	E_2	X_7	X_3
Regression Coefficient		.01885	.00002
Standard Error of Regression Coefficient	.0673	.00377	.00001
Standard Deviation	.1138	3.8164	1730.7930
Beta Coefficient		.63233	.30427
Simple Correlation Coefficient With E_2		.783766	.619104
Coefficient of Separate Determination		.49560	.18838
Multiple Correlation Coefficient (R)	.82813		
Multiple Correlation Coefficient Squared (R^2)	.68579		

The various coefficients and other statistical measures pertinent to the analysis of the multiple regression equation are found in Table 17. It will be noted that X_7 (per cent of families with income of $10,000 or more) accounted for nearly 50 per cent of the variance in local school effort based on property valuation. The other variable, X_9 (population per square mile), accounted for 19 per cent of the variation. This obviously meant that these two variables accounted for 69 per cent of the variation in E_2. This is easy to understand if one states that as population increases and income goes higher, effort fluctuates upward.

Table 18 presents the intercorrelations of E_2, X_7, and X_9. Table 19 shows the correlation of E_2 with all the independent variables.

TABLE 18

SIMPLE CORRELATION COEFFICIENTS AMONG E_2 AND SIGNIFICANT INDEPENDENT VARIABLES

Variables	X_7	X_9
E_2	.78	.62
X_7		.49

E_2 as a Dependent Variable in Four States

Table 20 presents the significant independent variables with E_2 as the dependent variable in each of the four states in the project. It was observed that one variable (X_5) appeared as a significant variable in three of the four states.

TABLE 19

SIMPLE CORRELATION COEFFICIENTS BETWEEN E_2 AND ALL INDEPENDENT VARIABLES

X_1	.400	X_{12}	.575
X_2	.707	X_{13}	.620
X_3	-.341	X_{14}	.699
X_4	.121	X_{15}	.617
X_5	-.746	X_{16}	.560
X_6	-.484	X_{17}	.779
X_7	.784	X_{18}	-.505
X_8	.295	X_{19}	.301
X_9	.619	X_{20}	-.191
X_{10}	-.742	X_{21}	.343
X_{11}	-.542	X_{22}	.382

TABLE 20

FOUR-STATE COMPARISON OF SIGNIFICANT 1960 SOCIOECONOMIC VARIABLES AS THEY PREDICT E_2 (Local Financial Effort, based on equalized valuation of property)

Variable	Coefficients of Separate Determination[a]			
	Fla.	Ga.	Ky.	Ill.
X_4 (federal revenue receipts per pupil in ADA)		.03(N)		
X_5 (state revenue receipts per pupil in ADA)	.30(N)	.79(N)		.16(P)
X_7 (per cent of families with income of $10,000 or more)			.50(P)	.24(P)
X_9 (population per square mile)		-.14(P)	.19(P)	
X_{10} (per cent 65 years old and over in total population)	.15(P)	—	—	—
Total[b]	.45	.68	.69	.40

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_2.

[b]The Total Coefficient of Separate Determination = R^2.

Summary

Since E_5 and E_7 were each measures of local financial effort based on net effective buying income, it was generally believed that there would be some large degree of similarity in their contributing variables. Such was not the case, however. In fact, there were no similar independent variables present in both regression equations. It was observed in Chapter 2 that there were many variations in rank order and movement about the median between E_5 and E_7. This should probably have been a clue that the socioeconomic factors would also be different. At any rate, this tends to corroborate Miner's (42) implication that relationships among variables over time will change.

E_2 had no common socioeconomic factors with either of the other dependent variables. Perhaps the only thing which can be said in general is that there seemed to be some indication that where wealth and population increased, effort also increased.

Table 21 is a presentation of the significant variables as they were related to E_5, E_7, and E_2.

The significant variable values for each district for the 1950 multiple regression studies of local financial effort are presented in Table 22. Table 23 shows the same information regarding the significant variables for 1960.

TABLE 21

SIGNIFICANT INDEPENDENT VARIABLES

Significant Independent Variables	Dependent Variables		
	E_5	E_7	E_2
X_5	X		
X_7			X
X_9			X
X_{11}	X		
X_{12}		X	
X_{17}	X		

TABLE 22

ACTUAL VALUES OF EACH SIGNIFICANT INDEPENDENT VARIABLE IN THE MULTIPLE REGRESSIONS OF LOCAL FINANCIAL EFFORT: 1950

District	Independent Variable		
	X_5	X_{11}	X_{17}
Ashland	41.03	0.0	3023
Boone	39.88	42.7	2148
Bowling Green	37.59	0.0	1346
Campbell	50.86	6.6	2904
Carter	60.67	45.9	1408
Christian	53.83	28.2	1502
Clay	73.98	63.0	1169
Covington	62.10	0.0	2831
Daviess	67.45	23.4	2209
Fayette	43.07	6.6	2107
Floyd	55.43	33.3	1833
Greenup	62.49	35.9	2191
Hardin	46.25	22.8	1329
Harlan	52.43	7.7	2215
Hopkins	43.22	22.0	1778
Jefferson	45.57	2.1	2852
Kenton	47.10	4.7	2987
Knox	80.41	46.3	1069
Letcher	65.36	32.8	1658
Lexington	39.32	0.0	1675
Louisville	50.67	0.0	2723
McCracken	40.37	13.5	2118
Muhlenberg	65.31	27.9	1234
Newport	55.09	0.0	2731
Owensboro	49.05	0.0	2483
Paducah	39.30	0.0	2172
Perry	69.51	29.5	1851
Pike	56.55	38.0	1919
Pulaski	67.40	50.8	1191

TABLE 23

ACTUAL VALUES OF EACH SIGNIFICANT INDEPENDENT VARIABLE IN THE MULTIPLE REGRESSIONS OF LOCAL FINANCIAL EFFORT: 1960

	Independent Variables		
District	X_7	X_9	X_{18}
Ashland	11.9	3475.9	84.3
Boone	11.2	87.1	83.9
Bowling Green	9.7	3148.6	81.4
Campbell	13.7	574.9	85.5
Carter	2.3	51.8	75.2
Christian	5.5	78.4	72.3
Clay	2.4	43.8	65.7
Covington	7.7	3773.5	79.2
Daviess	9.5	151.5	85.6
Fayette	13.5	471.1	82.4
Floyd	3.6	103.8	75.9
Greenup	5.7	83.5	86.2
Hardin	6.3	110.0	56.5
Harlan	4.2	109.0	82.0
Hopkins	5.8	69.3	82.7
Jefferson	14.8	1629.2	83.7
Kenton	12.3	731.5	84.9
Knox	1.7	67.7	76.1
Letcher	4.3	88.8	82.0
Lexington	7.8	3925.6	79.4
Louisville	11.9	5426.7	81.3
McCracken	9.3	228.3	86.4
Muhlenberg	4.5	57.7	74.0
Newport	8.3	3341.1	78.3
Owensboro	11.8	4719.0	86.4
Paducah	9.8	3831.1	85.9
Perry	4.3	101.9	78.3
Pike	4.1	86.8	77.9
Pulaski	3.3	54.6	74.9

CHAPTER 5

RELATIONSHIP OF SELECTED SOCIOECONOMIC FACTORS TO ELASTICITY OF DEMAND

The selection of socioeconomic factors, a discussion of the step-wise multiple regression program, the selection of significant regression coefficients, and the results of the multiple regression equation using local effort as the dependent variable were discussed in Chapter 4. The next logical step, then, would be to determine the relationship of the selected socioeconomic variables to the two elasticity of demand measures, D_3 and D_5.

D_3 as a Dependent Variable

An analysis of the step-wise regression program using elasticity of demand for education during the period 1945-54 (D_3) as the dependent variable revealed only one significant independent variable. This resulted in the following regression equation:

$$D_3 = .47434 + .00001\ X_{21}$$

Since only one independent variable was involved in the equation, the per cent of explained variance was obtained by squaring .596, the simple correlation between D_3 and X_{21}. Thus, X_{21} (population size) explained about 36 per cent of the fluctuation in D_3. This might be interpreted as meaning

that as population increased, the demand for educational services increased.

Table 24 shows the simple correlation coefficients between D_3 and each of the twenty-two independent variables.

D_3 as a Dependent Variable in Four States

Table 25 is included to show the results of the D_3 regression equations in all four states included in the project. This table shows that no independent variables were related to D_3 in Florida. Only one variable was significant in each of the other three states. X_{22} was found to be significant in both Georgia and Illinois.

D_5 as a Dependent Variable

The regression analysis using D_5 (elasticity of demand for education for the period 1953-62) as the dependent variable, showed that only one variable, X_{15} (per cent of employed persons engaged in manufacturing) to be significant. This resulted in the following regression equation:

$$D_5 = .14707 + .02383\ X_{15}$$

As in the previous discussion, the simple correlation (.581) between D_5 and X_{15} was squared to obtain the per cent of explained variance. This was observed to be .34, which means that X_{15} explained about 34 per cent of the fluctuation in D_5.

Table 26 was included to show the simple correlation coefficients between D_5 and all independent variables.

TABLE 24

SIMPLE CORRELATION COEFFICIENTS BETWEEN D_3 AND ALL INDEPENDENT VARIABLES

X_1	.473	X_{12}	.230
X_2	.310	X_{13}	.142
X_3	-.178	X_{14}	.182
X_4	.120	X_{15}	.252
X_5	.064	X_{16}	.048
X_6	.215	X_{17}	.132
X_7	.145	X_{18}	-.028
X_8	.091	X_{19}	.182
X_9	.388	X_{20}	-.055
X_{10}	-.281	X_{21}	.596
X_{11}	-.199	X_{22}	-.099

TABLE 25

FOUR-STATE COMPARISON OF SIGNIFICANT 1950 SOCIOECONOMIC VARIABLES AS THEY PREDICT D_3 (Elasticity of Demand for the Period 1945-54)

Variable	Fla.	Coefficients of Separate Determination[a] Ga.	Ky.	Ill.
X_{21} (population size)			.36(P)	
X_{22} (per cent population increase over 10-year period)		.12(N)	___	.17(N)
Total Coefficient of Separate Determination[b]		.17	.36	.17

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with D_3.

[b]The Total Coefficient of Separate Determination = R^2.

TABLE 26

SIMPLE CORRELATION COEFFICIENTS BETWEEN D_5 AND ALL INDEPENDENT VARIABLES

X_1	-.209	X_{12}	.299
X_2	.305	X_{13}	.250
X_3	-.367	X_{14}	.307
X_4	-.234	X_{15}	.581
X_5	-.291	X_{16}	.067
X_6	-.213	X_{17}	.379
X_7	.258	X_{18}	-.408
X_8	-.182	X_{19}	.368
X_9	.324	X_{20}	-.107
X_{10}	-.400	X_{21}	-.125
X_{11}	-.068	X_{22}	.138

D_5 as a Dependent Variable in Four States

An inspection of Table 27 disclosed that the significant variable X_{15} in Kentucky was not found to be a predictor in any of the other three states of the project. In fact, it was noted that only one variable (X_2) was found to be significant in two states (Georgia and Illinois).

General Conclusion

The data presented in this chapter showed no socioeconomic variables to be significant for predicting elasticity of demand in the four-state study. Furthermore, the same variables were not significant in a given state for predicting elasticity of demand in the first ten years of the period studied as compared with the last ten years. Therefore, it would be hazardous to predict a coefficient of elasticity of demand for education in the future of any state by the use of socioeconomic variables.

TABLE 27

FOUR-STATE COMPARISON OF SIGNIFICANT 1960 SOCIOECONOMIC VARIABLES AS THEY PREDICT D_5 (Elasticity of Demand for the Period 1953-62)

Variable	Coefficients of Separate Determination[a]			
	Fla.	Ga.	Ky.	Ill.
X_2 (per capita net effective buying income)		.11(P)		.21(P)
X_4 (federal revenue receipts per pupil in ADA)		.19(N)		
X_5 (state revenue receipts per pupil in ADA)				.24(N)
X_8 (per cent of population that is non-white)		.14(N)		
X_{15} (per cent in manual)			.34(P)	
X_{22} (per cent population increase over 10 year period)		.11(P)	—	—
Total Coefficient of Separate Determination[b]		.55	.34	.45

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with D_5.

[b]The Total Coefficient of Separate Determination = R^2.

CHAPTER 6

RELATIONSHIP OF SOCIOECONOMIC FACTORS TO REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR 1960

A common assumption in school finance is that higher quality in educational services is associated with a greater quantity of money spent per pupil in average daily attendance in districts of sufficient size and density to operate efficiently. This assumption led various researchers, discussed in Chapter 1, to attempt to account for variations in per pupil spending. This chapter is a partial replication of these studies. It would be important to know the factors in Kentucky that are associated with variations in revenue receipts per pupil in average daily attendance, if it is true that more money means higher quality.

Total local school revenue receipts per pupil in average daily attendance (R_4) was selected as the dependent variable. The method of step-wise multiple regression discussed in Chapter 4 was used and the independent variables were the twenty-two variables for 1960 which were previously listed. Table 86 in Appendix A shows the values for R_4 for each district.

R_4 as a Dependent Variable

Analysis of the step-wise regression program showed

two of the twenty-two socioeconomic factors to have significant regression coefficients as follows:

X_2 (per capita net effective buying income)

X_{10} (per cent rural non-farm)

The intercorrelations of X_2, X_{11}, and R_4 are found in Table 28.

TABLE 28

SIMPLE CORRELATION COEFFICIENTS AMONG R_4 AND SIGNIFICANT INDEPENDENT VARIABLES

Variables	X_2	X_{10}
R_4	.89	-.89
X_2		-.82

The resulting significant multiple regression equation was:

$$R_4 = 36.73878 + .08815\ X_2 - 1.08031\ X_{10}$$

Eighty-six per cent of the fluctuation in R_4 could be accounted for by these two independent variables. Further inspection of Table 29 revealed from the coefficients of determination that each factor contributed 43 per cent of the variation. This table also shows that there was a high simple correlation between R_4 and X_2 with an equally high negative correlation between R_4 and X_{10}. This would suggest that per capita income contributed considerably to the variations in money spent per pupil and that a high percentage of

TABLE 29

R_4 REGRESSION ANALYSIS

		Variables	
	R_4	X_8	X_{10}
Regression Coefficient		.08815	- 1.08031
Standard Error of Regression Coefficient	27.3757	.02251	.27625
Standard Deviation	71.4483	396.0184	32.2673
Beta Coefficient		.48859	- .48789
Simple Correlation Coefficient with R_4		.889361	- .889235
Coefficient of Separate Determination		.434534	.433845
Multiple Correlation Coefficient (R)	.93187		
Multiple Correlation Coefficient Squared (R^2)	.868382		

rural non-farm population was associated with less money spent per pupil. This was further substantiated by the high negative correlation between X_2 and X_{10} which might be interpreted as meaning that there was less per capita income in the rural non-farm areas. The rural non-farm population in Kentucky is not primarily a suburban population but a population whose chief occupation is mining.

R_4 as a Dependent Variable in Four States

Most of the researchers reviewed in Chapter I found a highly predictive value in some measure of income to per pupil expenditure or revenue receipts. This was further substantiated in the studies made in the four states of Project No. 2842. Three of the four states showed X_2 (per capita net effective buying income) as a highly significant variable (Table 30). None of the states other than Kentucky included X_{10} (per cent rural non-farm) as a predictive variable. This factor was probably unique to Kentucky with its declining coal industry and declining mountain population.

The simple correlation coefficients between R_4 and each of the selected socioeconomic variables considered in Kentucky are presented in Table 31.

[redacted]

Two socioeconomic factors, X_2 (per capita net effective buying income) and X_{10} (per cent rural non-farm), explained 86 per cent of the variation in local revenue receipts per pupil in ADA. It was also noted that X_2

appeared as a significant factor in three states of the study (Florida, Georgia, and Kentucky).

TABLE 30

FOUR-STATE COMPARISON OF SIGNIFICANT 1960 SOCIOECONOMIC VARIABLES AS THEY PREDICT R_4 (Total Local School Revenue Receipts Per Pupil in Average Daily Attendance)

Variable	Coefficients of Separate Determination[a] Fla.	Ga.	Ky.	Ill.
X_2 (per capita net effective buying income)	.50(P)	.49(P)	.43(P)	
X_3 (average daily attendance as a per cent of total population)		.17(N)		.26(N)
X_5 (state revenue receipts per pupil in ADA)				.25(N)
X_7 (per cent of families with income of $10,000 or more)				-.29(P)
X_{10} (per cent rural non-farm)			.43(N)	
X_{19} (per cent 65 years old and over in total population)	.22(P)			
X_{21} (population size)	___	.15(P)	___	.0
Total[b]	.72	.81	.86	.79

[a]The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with R_4.

[b]The Total Coefficient of Separate Determination = R^2.

TABLE 31

SIMPLE CORRELATION COEFFICIENTS BETWEEN H_4 AND ALL INDEPENDENT VARIABLES

X_1	.404	X_{12}	.476
X_2	.889	X_{13}	.681
X_3	-.618	X_{14}	.865
X_4	.822	X_{15}	.691
X_5	-.846	X_{16}	.630
X_6	-.665	X_{17}	.872
X_7	.859	X_{18}	-.551
X_8	.434	X_{19}	.410
X_9	.733	X_{20}	-.431
X_{10}	-.889	X_{21}	.507
X_{11}	-.538	X_{22}	.437

CHAPTER 7

SUMMARY AND CONCLUSIONS

Purpose of the Study

The purposes of this study were: (1) to determine whether Kentucky school districts of 20,000 population or above had followed relatively consistent patterns of fiscal policy as measured by financial effort in relation to ability and elasticity of demand for education from 1945 to 1962, and (2) to determine whether socioeconomic factors were associated with those patterns.

In reference to those purposes, answers were sought to the following questions:

(a) Have most of the school districts in Kentucky, which had 1960 census populations of 20,000 or more, followed relatively consistent patterns of local fiscal policy, as measured by local effort in relation to ability and elasticity of demand for education?

(b) What socioeconomic factors were associated with school effort in relation to ability and elasticity of demand?

(c) What unusual changes in fiscal policy have occurred through time in these districts?

Procedures

Patterns of local financial effort were examined by

the four following measures:

1. $E_1 = \frac{R_1}{W_1}$

2. $E_5 = \frac{R_1(1949\text{-}50)+R_1(1950\text{-}51)+R_1(1951\text{-}52)}{W_1(1949)+W_1(1950)+W_1(1951)}$

3. $E_7 = \frac{R_1(1959\text{-}60)+R_1(1960\text{-}61)+R_1(1961\text{-}62)}{W_1(1959)+W_1(1960)+W_1(1961)}$

4. $E_2 = \frac{R_1}{W_2}$

In these formulas:

R_1 = total local revenue receipts

W_1 = net effective buying income (aggregate for the district)

W_2 = estimated 100 per cent true value of property (aggregate for the district)

E = educational effort

Elasticity of local demand for education was examined by the following formula in which:

$$D = b_{yx} \cdot \frac{\bar{X}}{\bar{Y}}$$

In this formula:

D = elasticity of demand

b_{yx} = coefficient for predicting a dependent variable from an independent variable using the following formula:

$$b_{yx} = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}$$

X = independent variable

Y = dependent variable

$\bar{X}$ = mean of independent variable

$\bar{Y}$ = mean of dependent variable

Elasticity of local demand for education for three time periods is designated by the following symbols:

D_3 = elasticity of demand for a school district for the period 1945-1954

D_5 = elasticity of demand for a school district for the period 1953-1962

D_1 = elasticity of demand for a school district for the period 1945-1962

The relationship of twenty-two socioeconomic factors to measures of local financial effort and elasticity of demand for education were examined. Those twenty-two measures were coded as follows:

X_1 = average daily attendance

X_2 = per capita net effective buying income

X_3 = average daily attendance as a per cent of total population

X_4 = federal revenue receipts per pupil in ADA

X_5 = state revenue receipts per pupil in ADA

X_6 = per cent civilian labor force unemployed

X_7 = per cent of families with income of $10,000 or more

X_8 = per cent of population that is non-white

X_9 = population per square mile

X_{10} = per cent rural non-farm

X_{11} = per cent rural farm

X_{12} = per cent 14-17 years old in public or private schools

X_{13} = per sons 25 years and over--median school years completed

X_{14} = females 14 years and over, per cent in labor force

X_{15} = employed persons, per cent engaged in manufacturing

X_{16} = per cent 25 years and over, with four or more years of college, to total population

X_{17} = median income of families

X_{18} = married couples, per cent without own household

X_{19} = per cent 65 years and over in total population

X_{20} = per cent in ADA public schools 1-12 to total population age 7-17

X_{21} = population size

X_{22} = per cent population increase over ten-year period (1940-1950, 1950-1960)

In addition, the relationship between these twenty-two socioeconomic variables and local revenue receipts per pupil in average daily attendance (R_4) was analyzed.

The step-wise multiple regression program, for use with the 709 computer, was employed to examine the relationship between the twenty-two selected socioeconomic factors (independent variables) and measures of local financial effort and elasticity of demand (dependent variables).

Fiscal Policy Patterns as Measured by Effort and Elasticity

Two measurements of fiscal policy patterns were used in this study: local effort in terms of ability to pay and elasticity of local demand for education. The results of these measurements are presented in the following paragraphs.

Local Financial Effort

Fiscal policy patterns from 1945 to 1962 of each of the twenty-nine selected school districts in Kentucky were

measured in terms of local financial effort in relation to ability to pay (E_1). This measurement is the ratio of total local school revenue receipts (R_1) to net effective buying income (W_1).

In terms of the group median effort line, which showed a gradual increase in effort through time, the following observations were made:

(1) Fifteen of the selected districts consistently remained above, near, or below the group median throughout most of the study.

(2) Eight districts indicated changes which lowered their level in relation to the median.

(3) Five districts improved their position in relation to the group median effort line.

(4) One district had no discernible trend.

(5) In those districts which indicated changes in level of effort, the years 1952 and 1958 were most frequently indicated as the years of change in fiscal policy as measured by local effort.

In terms of direction of trend of each individual district, the following observations were made:

(1) Nineteen of the twenty-nine selected districts indicated a consistent general trend of effort through time. Of these, thirteen indicated an increasing effort pattern, five showed a decreasing effort pattern, and one was classified as remaining constant throughout most of the study.

(2) Five of the remaining districts began the study with a decreasing effort pattern and changed to a pattern of increasing effort.

(3) Two districts indicated the reverse of this with an increasing-decreasing pattern.

(4) Two districts had a more complicated pattern with a decreasing-increasing-decreasing trend line.

(5) One district showed the reverse of this with an increasing-decreasing-increasing pattern.

(6) The year 1952 was most frequently indicated as the year of policy change.

Fiscal policy in terms of local effort was also compared using the three-year period 1949-51 (E_5) and the three-year period 1959-61 (E_7). These two measurements were computed in a manner similar to E_1, except that the years centering around 1950 and 1960 were used. A comparison of these two measurements in terms of median effort revealed the following:

(1) A general increase in effort was indicated with a median E_5 of 1.250 and a median E_7 of 1.430.

(2) A rank order correlation of E_5 with E_7 was computed as .389.

(3) Twelve districts indicated a decrease in rank and a decrease in effort between 1950 and 1960.

(4) Fifteen districts changed upward in rank order position.

(5) Two districts did not change their rank order

position. One was a high rank district which increased effort, and the other was a low rank district which decreased effort.

A comparison was also made between E_1 (local effort in terms of income) and E_2 (local effort in terms of property valuation) for 1962. This comparison revealed the following:

(1) There was a correlation of .693 between E_1 and E_2 in 1962.

(2) There was a correlation of .637 between per capita income and per capita property valuation in 1962.

(3) Only five districts changed rank of ten or more places between E_1 and E_2 in 1962.

Elasticity of Demand

Fiscal policy, as reflected by elasticity of demand for education, did not lend itself to a meaningful year-by-year analysis, as an increase in elasticity in one year was too often followed by a decrease in elasticity the following year. Consequently, it was assumed to be more logical that increases in local school revenue could only be reflected in a greater time period. Therefore, elasticity of demand for education for the period 1945-54 (D_3) was compared with the elasticity of demand for the period 1953-62 (D_5). This comparison resulted in the following observations:

(1) There was a general trend in Kentucky of a decline in elasticity of demand. The median coefficient declined from .7034 for the period 1945-54 to .4856 for the period 1953-62.

(2) Twelve of the twenty-nine districts showed increased coefficients of elasticity over the period while seventeen showed decreases.

(3) Four districts had negative coefficients of elasticity in the latter period as opposed to two negative elasticities during the first period.

(4) The rank order correlation between D_3 and D_5 was .216.

Results of a Composite Measure of Fiscal Policy in Kentucky for the 1962-63 School Year

A total rank score method of measuring fiscal policy of the districts was developed. This procedure utilized the rank scores for E_1 and E_2 of 1962 and the rank scores for D_5. This computation showed that Owensboro, Greenup, and Jefferson were the three highest effort districts while Christian, Hardin, and Knox were the three lowest effort districts.

Relationship of Selected Socioeconomic Variables to Financial Effort Based on Net Effective Buying Income and Local Revenue Receipts

The following paragraphs present the relationship of the twenty-two socioeconomic variables to two measures of financial effort: effort for 1950 (E_5) and effort for 1960 (E_7).

1950 Regression with E_5 as the Dependent Variable

Inspection of the step-wise multiple regression program revealed that only three of the twenty-two independent

variables were significant predictors of variability in effort for 1950. These were X_5 (state revenue receipts per pupil in ADA), X_{11} (per cent rural farm), and X_{17} (median income of families).

These three variables, according to the multiple regression equation, were computed as having contributed only 60 per cent of the variation in E_5 as a dependent variable.

1960 Regression with E_7 as the Dependent Variable

Only one variable, X_{12} (per cent 14-17 years old in public or private schools), was found to be significant. It explained about 37 per cent of the fluctuation in effort for 1960.

Relationship of Selected Socioeconomic Variables to Financial Effort Based on Equalized Valuation of Property and Local Revenue Receipts

Two variables of the twenty-two selected socioeconomic factors were found to be significant in predicting 69 per cent of the fluctuation in E_2. These were X_7 (per cent of families with income of $10,000 or more) and X_9 (population per square mile).

Relationship of Selected Socioeconomic Variables to Elasticity of Demand for Education

Two regression equations using elasticity of demand for education as the dependent variable were used in this study. These were for the period 1945-54 (D_3) and for the

ten-year period 1953-62 (D_5). The results are presented in the following paragraphs.

1950 Regression with D_3 as the Dependent Variable

An analysis of the regression program using elasticity of demand for education during the period 1945-54 as the dependent variable revealed only one significant independent variable. This was X_{21} (population size), which accounted for 36 per cent of the fluctuation in D_3.

1960 Regression with D_5 as the Dependent Variable

Only one variable, X_{15} (per cent of employed persons engaged in manufacturing), was found to be significant as a predictor of D_5 fluctuation. This was computed in the regression equation as contributing 34 per cent of the variation in elasticity of demand for the period 1953-62.

Relationship of Selected Socioeconomic Variables to Revenue Receipts Per Pupil in ADA (R_4)

Two variables of the twenty-two independent variables were found to be significant predictors of fluctuation in R_4. These were X_2 (per capita net effective buying income) and X_{10} (per cent rural non-farm). The two together were computed to predict 86 per cent of the fluctuation in revenue receipts per pupil in ADA.

General Conclusions

It was noted that the year-by-year analysis of local effort patterns revealed wide fluctuations in effort among the selected districts. This was substantiated by comparing

measurements of effort for two periods of time, 1950 and 1960. Furthermore, there was an indication of decreasing elasticity of demand for education. It is quite probable that these things were related in a manner not investigated in this study. It is known, for instance, that many of the selected districts were declining in population. It is possible that this could cause erratic effort patterns as well as decrease the interest in trying to improve. It was also pointed out that the selected districts indicated a generally increasing median effort pattern and a generally decreasing elasticity of demand. This is possible where the rate of total population increase is lower than the rate of school population increase. In the selected districts, the population increased at a rate of 1.1 per cent per year during the ten-year period 1950-1960 and the rate of increase for school age children was 2.2 per cent per year for the same period.

It was also noted that only ten of the twenty-two socioeconomic variables used in the study were selected as significant in predicting fluctuation in local effort or elasticity of demand for education. No factor was significant in predicting variation in more than one dependent variable or in more than one year. This and other evidence cited throughout the study point out the fact that socioeconomic variables leave a large part of the local effort unexplained. It was not only shown that different variables were the best predictors in Kentucky at different points of time, but also that none of the states had common variables throughout the

study. It would thus seem that it is impossible to generalize through time in any given state regarding the relationship with any particular set of socioeconomic variables to local school effort. Furthermore, it is equally impossible to generalize on a state-to-state basis.

Doubtless there are other factors which subsequent researchers will study that can better explain variations in local school effort. As explained in Chapter 1, these may be: leadership of the superintendent or other school officials, the type of power structure in the district, the value system of the formal and informal power structure, and other similar factors.

APPENDICES

APPENDIX A

TABLES 32-88

TABLE 32

1945-46 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 227,375	$ 1,055	$ 45,454	$ --	$ 273,885
Boone	63,359	1,429	14,533	1,778	81,100
Bowling Green	99,537	3,111	9,343	--	111,992
Campbell	41,759	--	28,787	320	70,866
Carter	52,525	1,460	49,070	4,071	107,126
Christian	65,419	--	21,578	2,212	89,209
Clay	37,974	--	2,789	4,125	44,889
Covington	563,052	4,362	109,280	-	676,695
Daviess	87,775	--	20,585	2,169	110,530
Fayette	293,298	--	56,907	--	350,205
Floyd	63,893	295	143,174	2,625	209,989
Greenup	20,708	--	31,838	2,337	54,883
Hardin	60,109	480	29,765	2,556	92,912
Harlan	102,168	--	50,342	2,407	154,918
Hopkins	46,626	--	40,743	2,412	89,783
Jefferson	779,668	1,044	61,895	--	842,609
Kenton	106,830	--	46,726	--	153,556
Knox	25,004	--	24,237	2,978	52,219
Letcher	57,253	--	22,955	4,222	84,431
Lexington	411,204	10,890	51,624	--	473,718
Louisville	2,757,036	101,500	416,228	--	3,274,764
McCracken	43,745	-	26,105	4,426	74,278
Muhlenberg	33,298	--	20,281	5,326	58,904
Newport	266,386	3,677	35,370	--	305,435

TABLE 32 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 348,577	$ 2,288	$ 9,522	$ --	$ 360,388
Paducah	205,157	1,359	64,962	--	271,480
Perry	88,489	--	28	2,488	91,005
Pike	144,858	--	105,249	6,510	256,614
Pulaski	47,944	--	22,286	5,347	75,578

[a] Source: (25)

TABLE 33

1946-47 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 238,354	$ 1,189	$ 43,032	$ -	$ 282,576
Boone	88,593	3,619	17,505	1,120	110,838
Bowling Green	100,453	3,003	13,123	--	116,581
Campbell	60,514	--	27,612	--	88,126
Carter	84,541	1,449	18,914	3,774	108,678
Christian	106,791	--	32,087	2,138	141,017
Clay	34,483	818	7,165	4,039	45,907
Covington	589,188	8,992	118,432	--	716,613
Daviess	129,061	--	31,021	2,329	162,412
Fayette	351,000	--	70,509	--	421,510
Floyd	124,543	--	283,974	2,559	411,072
Greenup	42,387	--	63,030	2,514	107,932
Hardin	80,905	1,014	49,305	2,469	133,694
Harlan	157,214	--	75,384	10,850	243,449
Hopkins	70,014	17	59,072	2,468	131,573
Jefferson	1,043,985	1,093	166,556	--	1,211,634
Kenton	108,737	--	46,439	--	155,176
Knox	26,157	73	22,230	2,902	51,363
Letcher	82,763	--	4,416	5,527	92,707
Lexington	503,496	10,940	74,256	-	588,634
Louisville	3,370,485	124,300	460,000	16,000	3,970,785
McCracken	95,910	--	52,907	4,145	152,963
Muhlenberg	64,521	--	51,361	5,672	121,554
Newport	276,058	4,619	37,393	--	318,071

TABLE 33 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	21 Total Local School Revenue Receipts
Owensboro	$ 114,714	$ 279	$ 3,798	$ --	$ 118,792
Paducah	260,591	1,537	53,418	--	315,546
Perry	96,313	--	--	750	97,063
Pike	264,279	--	211,095	6,147	481,532
Pulaski	47,115	--	21,458	3,978	72,552

(a)Source: [26]

TABLE 34

1947-48 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	B, Total Local School Revenue Receipts
Ashland	$ 312,321	$ 1,934	$ 56,991	$ --	$ 371,248
Boone	127,979	1,594	22,910	1,990	154,464
Bowling Green	136,323	3,191	13,198	-	152,712
Campbell	71,546	-	45,963	?	117,517
Carter	78,754	1,272	72,152	3,583	155,763
Christian	133,054	--	39,655	2,273	174,983
Clay	50,069	--	14,086	3,687	67,841
Covington	558,540	--	119,934	--	678,475
Daviess	155,476	--	36,561	2,582	194,620
Fayette	476,186	--	89,885	--	566,071
Floyd	135,674	--	284,040	3,057	450,284
Greenup	42,210	--	62,777	2,885	107,873
Hardin	131,442	1,156	70,712	4,686	207,999
Harlan	193,515	208	100,349	14,021	308,095
Hopkins	98,894	255	79,713	3,904	182,768
Jefferson	1,381,380	1,340	186,726	--	1,569,447
Kenton	180,092	--	76,291	--	256,384
Knox	28,278	--	25,874	1,767	55,920
Letcher	103,872	560	38,078	7,556	150,966
Lexington	563,503	12,233	68,105	--	643,842
Louisville	5,722,126	--	--	--	5,722,126
McCracken	92,077	--	52,926	5,015	150,019
Muhlenberg	75,197	--	47,688	5,886	128,771
Newport	326,305	1,796	44,853	--	372,955

TABLE 34 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 316,049	$ 1,802	$ 10,633	$ --	$ 328,485
Paducah	130,003	--	63,043	--	193,046
Perry	150,363	--	--	2,305	152,668
Pike	312,966	--	230,949	6,695	550,606
Pulaski	65,049	477	30,032	4,117	99,676

[a]Source: (26)

TABLE 35

1948-49 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 340,293	$ 3,267	$ 56,218	$ --	$ 399,779
Boone	160,349	1,714	30,651	2,080	174,795
Bowling Green	148,160	3,327	12,615	--	164,103
Campbell	72,499	--	55,548	690	128,738
Carter	96,489	307	62,448	2,239	161,485
Christian	139,634	--	39,062	2,336	181,033
Clay	58,106		416	4,308	62,830
Covington	645,557	8,285	145,798	--	799,641
Daviess	180,528	177	39,596	2,983	223,286
Fayette	630,271	--	112,879	--	743,150
Floyd	135,587	--	285,003	2,889	423,480
Greenup	45,642	--	65,567	2,879	114,089
Hardin	138,748	1,312	72,863	5,118	218,042
Harlan	229,690	318	98,891	14,300	343,200
Hopkins	109,685	246	80,312	4,089	192,334
Jefferson	1,697,572	1,723	218,435	--	1,917,731
Kenton	201,446	275	82,247	--	283,968
Knox	29,621	--	22,845	3,327	55,794
Letcher	132,145	--	49,792	8,080	190,017
Lexington	734,357	13,397	86,707	--	834,462
Louisville	6,713,959	-	--	--	6,713,959
McCracken	100,916	--	53,180	5,281	159,377
Muhlenberg	83,444	-	49,595	6,174	139,214
Newport	358,160	3,087	39,240	--	400,489

TABLE 35 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	a/ Total Local School Revenue Receipts
Owensboro	$ 344,512	$ 1,882	$ 18,494	$ --	$ 364,890
Paducah	454,361	1,659	69,010	--	525,031
Perry	191,578	--	--	1,608	193,187
Pike	364,167	200	265,495	5,686	635,550
Pulaski	77,828	125	40,163	2,702	120,819

(a) Source: (27)

TABLE 36

1949-50 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 361,190	$ 4,121	$ 55,945	$ -	$ 421,256
Boone	154,655	2,250	31,398	2,119	190,422
Bowling Green	165,538	3,347	18,473	--	187,360
Campbell	84,880	1,477	56,069	692	143 120
Carter	89,911	1,839	82,400	3,324	177,475
Christian	148,692	--	40,013	2,265	190,972
Clay	86,211	--	16,754	3,913	106,879
Covington	756,522	8,513	151,427	--	916,463
Daviess	199,960	--	38,746	2,666	241,373
Fayette	680,457	37,971	116,652	-	835,081
Floyd	169,700	--	281,460	6,938	458,099
Greenup	55,665	--	60,058	2,669	118,393
Hardin	145,979	1,498	70,569	5,037	223,085
Harlan	247,475	360	101,632	10,881	360,349
Hopkins	122,041	28	81,909	5,370	209,359
Jefferson	2,183,685	2,291	225,176	--	2,411,153
Kenton	242,126	--	98,960	-	341,086
Knox	51,627	--	41,710	1,467	94,805
Letcher	146,712	1,204	53,853	7,457	209,227
Lexington	917,618	15,902	106,301		1,039,822
Louisville	7,399,085		--		7,399,085
McCracken	111,488	--	55,985	5,537	173,011
Muhlenberg	109,097	--	56,271	6,502	171,870
Newport	361,.47	9,012	40,933		411,094

TABLE 36 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 384,796	$ 2,027	$ 18,671	$ --	$ 405,495
Paducah	322,693	2,209	69,934	--	394,838
Perry	195,268	--	--	1,607	196,875
Pike	386,248	--	282,917	13,720	682,887
Pulaski	111,199		53,263	5,236	169,699

(a) Source: (27)

TABLE 37

1950-51 SCHOOL REVENUE RECEIPTS [a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Ashland	$ 404,932	$ 4,501	$ 60,920	$ --	$ 470,353
Boone	164,952	1,536	32,147	2,296	200,933
Bowling Green	173,031	3,350	19,078	--	195,459
Campbell	95,615	--	57,803	686	153,505
Carter	87,324	1,910	80,414	4,654	174,303
Christian	156,457	--	38,004	4,670	199,132
Clay	82,900	1,285	15,453	4,589	104,228
Covington	775,657	12,197	153,782	--	941,638
Daviess	242,595	246	44,401	2,893	290,135
Fayette	799,677	--	124,497	--	923,774
Floyd	208,034	400	240,918	8,149	457,503
Greenup	59,855	--	64,949	3,410	128,215
Hardin	150,622	1,783	70,029	5,736	228,171
Harlan	244,324	381	90,937	15,416	351,060
Hopkins	126,823	367	83,086	4,174	214,452
Jefferson	2,277,944	2,800	260,581	--	2,541,326
Kenton	271,344	372	97,224	--	368,941
Knox	63,987	--	45,033	3,143	112,163
Letcher	139,884	1,179	56,518	6,790	204,372
Lexington	872,494	16,539	112,188	--	1,001,221
Louisville	6,216,934	136,008	906,877	-	7,261,820
McCracken	122,928	--	54,316	5,642	182,886
Muhlenberg	111,372	--	74,694	6,870	192,937
Newport	390,569	1,110	38,222	--	429,902

TABLE 37 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	By Total Local School Revenue Receipts
Owensboro	$ 430,018	$ 2,109	$ 20,773	$ --	$ 452,901
Paducah	412,811	2,249	71,791	--	486,852
Perry	138,735	--	62,061	1,592	202,389
Pike	389,180	219	281,870	14,135	685,403
Pulaski	115,714	167	49,852	5,041	170,775

(a)Source: [28]

TABLE 38

1951-52 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 448,658	$ 3,915	$ 60,037	$ -	$ 512,611
Boone	183,595	1,545	47,698	2,470	235,308
Bowling Green	184,899	3,364	26,412	--	214,676
Campbell	104,073	--	59,555	382	164,010
Carter	111,679	1,360	83,117	5,005	203,163
Christian	189,115	--	42,058	5,542	236,717
Clay	85,195	1,270	16,674	4,375	107,547
Covington	935,709	8,072	149,371	--	1,093,154
Daviess	258,138	244	52,391	2,928	313,709
Fayette	1,134,668	--	166,283	26,169	1,327,121
Floyd	182,345	--	270,930	7,673	460,949
Greenup	60,277	--	80,780	2,983	144,042
Hardin	171,264	1,228	75,286	5,954	254,234
Harlan	267,002	396	98,258	11,183	376,841
Hopkins	250,183	3,580	101,560	8,737	366,041
Jefferson	2,642,861	2,850	308,248	--	2,953,960
Kenton	295,480	378	108,956	--	404,815
Knox	67,942	--	50,963	2,867	121,773
Letcher	161,234	1,196	59,090	7,377	228,899
Lexington	912,271	16,521	112,011	--	1,040,805
Louisville	6,778,707	133,449	892,042	--	7,804,200
McCracken	145,987	--	59,893	6,238	212,118
Muhlenberg	112,166	-	82,975	6,996	202,137
Newport	402,916	7,370	37,546	--	447,833

TABLE 38 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 457,595	$ 2,410	$ 31,359	$ -	$ 491,275
Paducah	409,239	2,989	81,990	--	494,219
Perry	147,926	--	68,412	2,446	218,784
Pike	389,805	147	296,661	15,340	701,954
Pulaski	130,096	160	54,126	4,824	189,207

[a] Source: (28)

TABLE 39

1952-53 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 476,882	$ 3,792	$ 63,161	$ --	$ 543,836
Boone	190,796	1,847	42,286	2,565	237,496
Bowling Green	213,930	3,664	31,668	--	249,263
Campbell	136,522	--	60,714	670	197,[illegible]
Carter	114,949	2,029	85,522	5,172	207,[illegible]
Christian	208,111		46,218	6,312	260,642
Clay	83,139	--	21,713	4,532	109,385
Covington	922,714	8,968	150,848	--	1,082,552
Daviess	263,719	246	55,740	3,151	322,859
Fayette	1,068,910	--	102,710	--	1,171,620
Floyd	190,295		266,328	7,062	423,685
Greenup	61,062	--	87,973	3,097	152,133
Hardin	167,599	1,739	80,030	6,968	256,338
Harlan	261,801	388	99,145	12,239	373,375
Hopkins	254,854	3,945	111,255	9,654	379,709
Jefferson	2,804,382	--	313,033	--	3,117,416
Kenton	339,105	388	118,985	--	458,479
Knox	66,754	--	48,814	2,786	118,355
Letcher	172,519	2,093	61,455	6,688	242,756
Lexington	957,088	19,582	115,480	--	1,092,152
Louisville	6,656,679	157,543	906,476	--	7,720,700
McCracken	178,721	--	61,496	8,138	248,356
Muhlenberg	112,879		86,483	6,608	205,970
Newport	425,529	6,443	35,442	--	467,415

TABLE 39 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 570,969	$ 2,704	$ 34,616	$ --	$ 608,290
Paducah	522,532	3,149	123,889	--	649,570
Perry	160,042	--	67,354	2,160	229,556
Pike	406,162	181	298,475	15,708	720,527
Pulaski	117,221	125	61,121	3,405	181,874

[a] Source: (29)

TABLE 40

1953-54 SCHOOL REVENUE RECEIPTS [a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Ashland	$ 497,397	$ 4,498	$ 64,792	$	$ 566,690
Boone	211,046	1,905	55,452	8,692	271,096
Bowling Green	222,781	3,086	37,930	--	258,797
Campbell	142,796	-	70,134	721	213,652
Carter	113,629	2,607	94,638	4,646	125,572
Christian	232,289	-	54,568	7,284	294,142
Clay	90,098	--	19,039	4,456	113,593
Covington	974,699	12,681	142,068	--	1,129,449
Daviess	273,974	293	71,944	3,318	309,532
Fayette	1,157,310	--	156,299	--	1,313,609
Floyd	165,719	604	289,997	8,204	464,525
Greenup	64,077	-	101,015	3,241	168,335
Hardin	193,426	1,658	89,421	7,255	291,761
Harlan	252,835	382	107,158	9,180	369,556
Hopkins	249,893	4,029	124,621	10,110	388,654
Jefferson	3,241,996	3,346	370,852	--	3,616,194
Kenton	361,739	314	115,324	--	477,378
Knox	81,315	--	41,543	2,541	125,371
Letcher	168,885	1,539	66,521	6,075	242,421
Lexington	959,016	20,056	133,727	--	1,112,800
Louisville	6,749,407	165,767	920,127	--	7,835,298
McCracken	273,898	--	107,838	8,763	390,500
Muhlenberg	125,861	--	89,517	6,257	221,637
Newport	469,719	3,590	35,016	--	508,326

TABLE 40 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	All Total Local School Revenue Receipts
Owensboro	$ 526,510	$ 3,357	$ 36,228	$ -	$ 566,095
Paducah	616,158	4,736	92,873	--	713,768
Perry	80,493	--	134,377	-	214,870
Pike	398,402	168	306,345	14,979	719,895
Pulaski	140,184	244	50,000	1,673	192,102

(a)Source: (29)

TABLE 41

1954 55 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 557,677	$ 4,907	$ 68,478	$ --	$ 631,063
Boone	231,982	5,509	49,421	2,926	289,839
Bowling Green	229,735	3,347	34,547	--	267,630
Campbell	170,560	--	68,408	369	239,337
Carter	109,680	2,332	95,203	4,941	212,158
Christian	198,281	--	51,877	6,097	256,255
Clay	99,113	--	12,081	4,420	115,615
Covington	1,105,612	8,500	131,931	--	1,246,044
Daviess	295,900	364	80,967	3,842	381,054
Fayette	1,440,809	--	190,762	--	1,641,571
Floyd	192,349	534	262,455	8,870	464,209
Greenup	68,006	--	117,657	3,489	189,153
Hardin	226,116	1,679	92,871	7,639	328,306
Harlan	265,431	427	98,861	9,470	374,190
Hopkins	406,020	3,492	131,031	10,201	550,746
Jefferson	4,949,557	3,539	513,356	--	5,466,449
Kenton	424,149	372	117,535	--	542,057
Knox	74,332	--	53,527	2,747	130,606
Letcher	164,291	1,594	62,657	6,037	234,580
Lexington	1,079,717	20,536	147,034	--	1,247,285
Louisville	9,206,897	179,505	1,236,657	--	10,623,061
McCracken	299,219	--	114,152	8,697	422,069
Muhlenberg	154,136	--	94,868	6,455	255,460
Newport	483,258	4,060	37,385	--	524,703

TABLE 41 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Owensboro	$ 645,020	$ 3,865	$ 40,257	$ --	$ 689,143
Paducah	715,179	5,123	111,779	--	832,082
Perry	200,408	--	--	1,271	201,680
Pike	433,793	172	303,989	19,274	757,230
Pulaski	112,195	--	55,000	--	167,195

(a)Source: (30)

TABLE 42

1955-56 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 535,272	$ 5,881	$ 70,876	$ --	$ 612,030
Boone	288,215	1,992	69,729	2,997	362,933
Bowling Green	236,804	3,347	38,195	--	278,347
Campbell	187,864	--	72,509	808	261,182
Carter	108,114	2,318	110,222	6,109	226,765
Christian	205,234	--	53,897	6,555	265,687
Clay	109,556	--	723		110,280
Covington	1,081,656	7,682	111,753	--	1,201,091
Daviess	346,641		54,504	--	401,145
Fayette	1,568,798	--	193,240	.	1,762,039
Floyd	182,523	630	263,488	9,794	456,436
Greenup	89,009		153,329	3,686	246,105
Hardin	242,988	1,709	99,705	8,066	352,549
Harlan	248,484	486	94,559	9,134	352,662
Hopkins	380,632	3,577	130,989	10,288	525,457
Jefferson	5,788,875	1,595	585,462	--	6,375,933
Kenton	439,231	372	127,803	--	567,407
Knox	79,688	--	54,824	1,811	135,714
Letcher	162,502	1,663	60,004	6,117	230,288
Lexington	1,262,171	21,569	166,073	--	1,449,813
Louisville	8,954,745	193,050	1,237,686	--	10,385,482
McCracken	283,504	--	119,218	8,755	409,478
Muhlenberg	146,254		95,871	6,797	249,423
Newport	567,978	4,140	37,122		609,240

TABLE 42 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	All Total Local School Revenue Receipts
Owensboro	$ 661,551	$ 4,231	$ 44,630	$ --	$ 710,413
Paducah	839,405	5,929	115,664	11,650	972,649
Perry	125,038	--	65,380	1,681	192,100
Pike	401,057	--	302,605	18,612	722,275
Pulaski	133,579	359	56,280	9,739	199,958

(a) Source: (30)

TABLE 43

1956-57 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 577,120	$ 2,146	$ 86,086	$62,097	$ 732,451
Boone	316,577	2,200	66,378	3,121	388,278
Bowling Green	242,135	3,347	41,068	--	286,551
Campbell	198,768		75,422	593	274,834
Carter	111,706	2,576	129,373	5,546	249,203
Christian	219,542	--	53,961	6,574	280,078
Clay	96,663	1,275	11,045	2,534	111,479
Covington	1,193,854	7,614	135,356	-	1,336,824
Daviess	385,502	--	71 463	--	456,965
Fayette	1,620,654		199,798	--	1,820,453
Floyd	226,834	3,142	277,494	9,950	517,422
Greenup	97,743	--	168,284	4,123	270,150
Hardin	256,187	1,787	91,824	8,076	359,875
Harlan	244,352	511	96,873	12,076	353,813
Hopkins	388,057	5,761	153,943	12,590	560,353
Jefferson	6,861,518	1,456	645,345	-	7,508,319
Kenton	476,477	403	135,788	--	612,669
Knox	77,692	--	54,748	2,531	134,973
Letcher	159,844	1,713	61,659	5,438	228,656
Lexington	1,245,700	22,489	175,403	--	1,443,593
Louisville	9,013,227	202,008	1,237,444	--	10,452,680
McCracken	280,099	--	124,630	--	404,730
Muhlenberg	154,858	-	107,082	6,461	263,402
Newport	622,428	4,060	45,507	--	671,995

TABLE 43 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 694,803	$ 4,349	$ 49,835	$ --	$ 748,987
Paducah	753,649	6,604	121,064	13,020	894,339
Perry	198,404	--	72	2,331	200,808
Pike	397,651	--	308,247	16,709	722,607
Pulaski	159,112	782	66,249	5,126	231,270

[a] Source: (31)

TABLE 44

1957-58 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 583,358	$ 8,576	$ 87,057	$	$ 698,993
Boone	348,819	1,940	101,754	3,350	455,862
Bowling Green	309,852	4,253	38,296	--	352,402
Campbell	205,523	--	77,507	250	283,281
Carter	114,631	2,480	73,110	4,658	194,885
Christian	250,530	--	55,388	6,519	312,439
Clay	105,435	6,610	8,134	5,188	125,369
Covington	1,208,656	18,231	150,136		1,377,023
Daviess	380,898	--	72,348	--	453,246
Fayette	1,716,820	--	219,390	--	1,936,211
Floyd	276,194		207,117	10,491	513,801
Greenup	103,047	--	97,820	3,840	204,709
Hardin	265,349	1,636	94,270	7,981	369,238
Harlan	244,345	606	98,473	11,422	354,848
Hopkins	390,037	5,757	154,257	10,510	560,557
Jefferson	7,845,595	1,782	682,934	--	8,530,312
Kenton	678,167	457	185,942	--	864,562
Knox	77,941		51,043	2,380	131,424
Letcher	175,746	1,893	63,138	5,722	246,502
Lexington	1,190,280	23,137	203,773	-	1,417,190
Louisville	9,070,985	230,983	1,387,217		10,689,186
McCracken	299,701	--	130,856	--	430,557
Muhlenberg	183,607	--	103,564	6,385	293,555
Newport	658,340	4,259	58,425	--	721,025

TABLE 44 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Owensboro	$ 887,276	$ 4,976	$ 55,003	$	$ 947,255
Paducah	756,762	7,021	126,727	11,893	902,404
Perry	124,631	--	69,414	2,489	196,535
Pike	410,647	--	327 480	16,311	754,439
Pulaski	132,080	422	62,498	4,636	199,638

[a]Source: (31)

TABLE 45

1958-59 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[R] Total Local School Revenue Receipts
Ashland	$ 874,463	$ 9,708	$ 122,505	$ --	$ 1,006,377
Boone	367,646	2,373	94,072	3,544	467,634
Bowling Green	317,232	4,303	49,487	--	371,024
Campbell	281,042	--	92,612	496	374,150
Carter	118,178	2,893	162,470	7,611	281,154
Christian	250,553	--	57,172	6,230	313,956
Clay	97,491	401	18,826	4,542	121,262
Covington	1,382,213	11,147	146,086	--	1,539,448
Daviess	392,294	--	93,623	--	485,916
Fayette	2,017,822	--	230,486		2,248,409
Floyd	262,689	3,719	303,742	9,512	579,663
Greenup	112,023	--	206,642	3,995	322,661
Hardin	243,474	1,490	96,731	8,131	349,828
Harlan	236,654	505	97,145	10,197	344,468
Hopkins	403,182	5,632	185,467	11,069	605,350
Jefferson	8,533,968	1,629	814,079	--	9,349,677
Kenton	712,068	496	188,339	--	900,903
Knox	75,687	--	49,776	3,514	128,919
Letcher	170,288	2,076	63,952	5,003	241,320
Lexington	1,481,767	24,519	196,549	--	1,702,835
Louisville	9,169,493	261,414	1,443,830	--	10,874,928
McCracken	307,228	--	139,639		446,868
Muhlenberg	215,759		105,038	6,436	327,234
Newport	698,263	4,065	53,645	--	755,964

TABLE 45 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$ 928,472	$ 6,783	$ 72,515	$ --	$ 1,007,771
Paducah	748,063	7,958	121,418	9,458	886,899
Perry	104,958	--	67,853	2,104	174,902
Pike	357,278	--	413,681	15,860	786,820
Pulaski	148,085	290	66,756	4,264	219,393

[a] Source: (32)

TABLE 46

1949-50 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 857,650	$ 10,122	$ 109,699	$ --	$ 976,4
Boone	388,280	2,381	95,862	3,744	490,1
Bowling Green	507,823	8,029	55,376	--	571,229
Campbell	427,496	--	141,421	511	569,428
Carter	116,021	3,149	112,450	6,970	238,591
Christian	235,133	330	60,837	6,504	302,806
Clay	93,132	11,016	11,636	4,264	120,0
Covington	1,271,191	10,888	144,007	--	1,426,0
Daviess	537,280	--	89,218		626,498
Fayette	2,165,391	--	232,968	--	2,398,359
Floyd	237,577	3,882	304,204	8,272	553,956
Greenup	132,879	--	161,360	4,281	298,520
Hardin	253,139	1,346	95,320	8,611	356,4
Harlan	223,260	607	90,821	9,763	324,352
Hopkins	399,443	5,620	153,321	11,049	569,0
Jefferson	9,059,228	1,596	824,979	--	9,885,8
Kenton	753,212	515	189,748	--	943,476
Knox	70,981	-	48,511	2,736	122,228
Letcher	169,001	2,245	61,194	5,015	237,456
Lexington	1,690,062	26,837	183,985	-	1,700,8
Louisville	9,149,968	283,826	1,364,215		10 797,0 0
McCracken	320,100	--	137,920	--	458,020
Muhlenberg	209,847	--	114,959	6,29	331,101
Newport	662,838	6,655	53,093	-	722,587

TABLE 46 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	(a) Total Local School Revenue Receipts
Owensboro	$ 949,261	$ 6,654	$ 68,825	$	$ 1,024,741
Paducah	869,9[illegible]	8,456	136,814	12,792	1,027,992
Perry	134,300	.	62,828	2,292	199,429
Pike	420,648	--	358,879	14,966	802,294
Pulaski	150,850	301	69,341	4,836	225,330

(a) Source: (32)

TABLE 47

1960-61 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[b] Total Local School Revenue Receipts
Ashland	$ 858,178	$ 10,772	$ 120,482	$	$ 989,430
Boone	435,216	2,508	88,279	3,867	529,871
Bowling Green	298,731	6,506	65,254	-	370,580
Campbell	435,091	-	134,708	473	570,272
Carter	121,205	3,696	117,417	6,939	248,959
Christian	257,840	332	60,391	6,691	325,255
Clay	97,213	3,085	20,651	4,559	125,509
Covington	1,374,242	12,945	167 036	--	1,554,263
Daviess	593,529		102,877	--	691,396
Fayette	2,300,671	--	259,027	--	2,649,649
Floyd	340,091	4,048	283 864	8,909	536,907
Greenup	140,684	--	177,951	4,047	322,683
Hardin	269,536	1,509	94,114	7,931	373,092
Harlan	217,632	614	80,058	8,131	314,437
Hopkins	546,477	6,869	215,396	10,682	779,435
Jefferson	9,897,383	1,856	838,015	-	10,737,255
Kenton	811,276	520	181,335	--	993,132
Knox	74,801	-	49,241	2,856	126,970
Letcher	165,857	2,277	56,851	4,643	229,640
Lexington	1,430 428	28,193	219,024	--	1,677,646
Louisville	9,261,627	110,493	1,447,749	--	11,819,810
McCracken	343,474	--	128,378	-	471,850
Muhlenberg	218,469	-	114,227	6,067	332,765
Newport	637,299	1,252	54,510	-	693,062

TABLE 47 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Budgeted
Owensboro	$1,084,003	$ 7,430	$ 62,570	$.	$ 1,174,011
Paducah	784,670	9,037	187,812	12,485	994,007
Perry	115,162	.	60,129	1,707	177,000
Pike	439,927	--	343,648	14,166	797,742
Pulaski	155,188	348	68,392	4,746	228,674

[a] Source: (33)

TABLE 48

1961-62 SCHOOL REVENUE RECEIPTS[a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	Total Local School Revenue Receipts
Ashland	$ 879,817	$ 11,578	$ 111,540	$ --	$ 1,001,936
Boone	450,511	2,673	96,293	--	555,478
Bowling Green	422,127	7,548	66,773	--	496,419
Campbell	474,602	-	129,480	431	603,914
Carter	126,294	3,538	110,958	5,996	246,388
Christian	278 779	345	60,107	5,076	344,309
Clay	108,119	1,450	21,205	3,887	134,752
Covington	1,417,030	9,938	148,971		1,575,746
Daviess	585,357	-	102,324	--	689,679
Fayette	2,648,459	-	245,918	--	2,892,377
Floyd	246,607	4,627	264,364	7,067	522,661
Greenup	146,364	--	158,852	3,504	308,701
Hardin	280,531	1,546	83,419	7,471	372,968
Harlan	214,780	243	79,634	7,205	302,164
Hopkins	553 145	7,008	205,205	--	765,359
Jefferson	10,598,754	6,553	827,357		11,432,665
Kenton	847,198	599	174,496		1,022,295
Knox	80,278		42,993	2,299	125,571
Letcher	177,901	2,560	51,119	2,220	233,801
Lexington	1,437,552	30,220	189,823		1,657,596
Louisville	9,318,234	341,250	1,404,592	--	11,064,023
McCracken	351,125		124,322	--	475,448
Muhlenberg	223,322	--	110,643		333,965
Newport	746,155	4,075	51,764	--	801,994

TABLE 48 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[a] Total Local School Revenue Receipts
Owensboro	$1,103,198	$ 9,366	$ 77,183	$ --	$ 1,189,749
Paducah	835,125	9,661	188,392	11,433	1,044,611
Perry	114,237	-	55,449	1,254	170,941
Pike	439,491	--	331,758	11,715	782,969
Pulaski	161,927	--	65,629	4,757	232,310

[a] Source: (33).

TABLE 49

1962-63 SCHOOL REVENUE RECEIPTS [a]

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	[1] Total Local School Revenue Receipts
Ashland	$ 540,024	$ 12,254	$ 105,016	$	$ 952,894
Boone	561,656	2,778	110,814	--	657,249
Bowling Green	522,577	8,227	55,860		586,665
Campbell	495,149	--	121,214	351	616,714
Carter	131,781	4,041	104,[illegible]	6,575	248,890
Christian	289,044	422	54,964	8,155	353,907
Clay	107,712	1,526	21,868	4,025	135,132
Covington	1,335,722	9,231	141,373	--	1,489,327
Daviess	613,384	--	106,079	--	719,463
Fayette	3,598,387		324,144	--	3,922 532
Floyd	235,610	4,220	259,761	6,240	505,232
Greenup	148,708	-	156,221	3,364	308,294
Hardin	298,867	1,659	58,282	8,216	367,025
Harlan	206,962	869	74,755	9,322	291,839
Hopkins	540,548	7,753	196,607	--	745,209
Jefferson	13,715,362	13,915	1,054,247	-	14,783,524
Kenton	880,437	738	178,709	--	1,068,885
Knox	84,981	547	33,290	2,107	131,427
Letcher	173,401	2,643	49,867	4,198	230,911
Lexington	1,583,344	33,365	186,201		1,802,911
Louisville	8,838,487	164,868	1,365,572	-	10,569,427
McCracken	357,267	--	120,603	--	477,870
Muhlenberg	224,353	-	113,640	--	338,029
Newport	903,924	4,093	40,896	-	948,704

TABLE 47 Continued

District	Property Tax	Bank Shares Tax	Franchise Tax	Poll Tax	All Total Local School Revenue Sources
Owensboro	$1,290,952	$ 9,519	$ 118,304	$ -	$ 1,408,815
Paducah	801,822	10,272	187,984	9,604	1,011,723
Perry	116,597	--	56,629	2,140	175,369
Pike	425,470	--	326,659	14,467	766,596
Pulaski	157,403	464	80,575	4,634	243,077

(a) Source: (34)

TABLE 50

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1945

District	Population SM[a] Estimate (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	29.0	$ 29,357	$1,012
Boone	8.2	3,205	376
Bowling Green	18.0	13,487	749
Campbell	10.2	10,248	1,005
Carter	20.5	6,694	326
Christian	18.5	4,627	250
Clay	19.0	2,994	158
Covington	65.0	86,292	1,328
Daviess	16.2	6,965	430
Fayette	24.1	25,575	1,053
Floyd	23.2	15,497	377
Greenup	10.7	3,060	328
Hardin	26.0	12,122	520
Harlan	54.2	24,422	498
Hopkins	17.7	10,576	598
Jefferson	67.8	48,184	711
Kenton	27.8	10,912	696
Knox	19.3	5,114	265
Letcher	25.5	9,917	389
Lexington	53.0	81,905	1,545
Louisville	365.0	560,115	1,535
McCracken	7.3	6,507	891
Muhlenberg	21.4	10,172	478
Newport	30.6	32,111	1,049
Owensboro	33.0	30,292	918
Paducah	35.5	38,754	1,092
Perry	32.9	16,027	487
Pike	58.3	18,104	311
Pulaski	24.7	7,419	341

[a] Source: (52)

TABLE 51

PER CAPITA AND NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1946

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	35.0	$ 29,936	$ 827
Boone	9.4	3,140	347
Bowling Green	22.5	13,145	584
Campbell	12.2	10,651	874
Carter	21.9	6,596	301
Christian	20.6	5,410	263
Clay	20.3	2,956	146
Covington	68.0	90,784	1,335
Daviess	19.7	9,240	469
Fayette	30.7	23,201	756
Floyd	47.3	15,246	348
Greenup	11.9	3,598	303
Hardin	13.3	12,797	479
Harlan	26.6	24,089	458
Hopkins	20.5	11,302	524
Jefferson	98.9	64,619	653
Kenton	34.5	12,060	594
Knox	20.8	5,077	244
Letcher	27.7	9,895	358
Lexington	70.0	92,588	1,323
Louisville	375.0	554,631	1,479
McCracken	10.4	6,778	652
Muhlenberg	23.2	10,165	440
Newport	34.0	31,645	931
Owensboro	33.5	37,300	1,113
Paducah	37.0	38,195	1,032
Perry	35.2	15,796	449
Pike	62.5	17,840	285
Pulaski	26.5	7,407	313

[a]Source: (53)

TABLE 52

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1947

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	35.2	$ 36,526	$1,038
Boone	9.4	4,461	477
Bowling Green	20.8	17,139	824
Campbell	12.0	11,683	976
Carter	21.9	9,309	425
Christian	23.6	7,593	367
Clay	20.5	4,171	203
Covington	67.8	116,053	1,712
Daviess	19.7	11,011	559
Fayette	23.0	26,938	1,171
Floyd	43.7	21,430	490
Greenup	12.1	5,095	423
Hardin	27.8	17,880	677
Harlan	58.2	25,416	483
Hopkins	20.4	15,730	738
Jefferson	98.9	78,134	790
Kenton	20.0	15,973	798
Knox	20.8	7,120	342
Letcher	28.1	14,154	503
Lexington	60.6	107,082	1,767
Louisville	372.5	673,151	1,807
McCracken	10.5	8,598	819
Muhlenberg	23.1	14,361	622
Newport	34.1	35,030	1,027
Owensboro	33.5	44,598	1,331
Paducah	37.1	49,105	1,324
Perry	35.4	22,293	630
Pike	62.7	22,811	364
Pulaski	26.5	10,354	442

[a]Source: (54)

TABLE 53

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1948

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	32.0	$ 37,540	$1,173
Boone	11.5	4,585	486
Bowling Green	20.0	18,520	926
Campbell	12.5	15,988	1,284
Carter	22.0	9,568	435
Christian	25.9	7,814	344
Clay	20.6	4,286	208
Covington	66.5	93,765	1,410
Daviess	23.3	21,456	921
Fayette	30.3	52,546	1,734
Floyd	47.6	22,035	501
Greenup	21.7	5,293	433
Hardin	27.9	18,405	693
Harlan	58.4	30,759	580
Hopkins	38.8	15,350	725
Jefferson	108.2	110,053	1,017
Kenton	22.1	32,434	1,467
Knox	24.5	7,334	350
Letcher	36.2	9,874	513
Lexington	58.6	91,650	1,564
Louisville	370.4	625,232	1,688
McCracken	15.0	8,837	589
Muhlenberg	32.0	14,472	637
Newport	33.5	41,741	1,246
Owensboro	31.9	39,365	1,234
Paducah	41.0	50,468	1,231
Perry	35.6	22,913	644
Pike	63.0	23,445	372
Pulaski	26.5	10,631	454

[a]Source: (55)

TABLE 54

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1949

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	35.2	$ 41,170	$1,170
Boone	11.7	8,095	844
Bowling Green	20.6	19,714	957
Campbell	42.8	16,214	1,268
Carter	22.4	10,069	448
Christian	27.4	15,450	651
Clay	20.9	4,492	215
Covington	67.6	94,501	1,398
Daviess	20.6	17,925	870
Fayette	29.7	51,452	1,732
Floyd	54.6	28,819	573
Greenup	22.1	5,634	447
Hardin	28.4	19,262	714
Harlan	59.3	32,265	600
Hopkins	39.7	16,086	749
Jefferson	115.0	121,329	1,055
Kenton	22.7	33,134	1,461
Knox	24.9	7,713	362
Letcher	36.8	15,440	530
Lexington	61.2	94,916	1,551
Louisville	370.6	629,480	1,699
McCracken	15.2	8,722	574
Muhlenberg	32.5	14,556	597
Newport	34.0	42,279	1,244
Owensboro	36.9	45,557	1,235
Paducah	41.7	51,549	1,236
Perry	31.8	20,426	642
Pike	64.0	24,619	385
Pulaski	27.0	11,572	469

[a] Source: (56)

TABLE 55

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1950

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	31.7	$ 36,709	$1,158
Boone	13.2	9,873	835
Bowling Green	17.8	16,857	947
Campbell	13.9	17,399	1,253
Carter	23.0	10,235	445
Christian	24.0	13,135	603
Clay	23.5	5,006	213
Covington	65.5	90,652	1,384
Daviess	24.1	21,878	908
Fayette	45.0	74,898	1,664
Floyd	54.5	28,312	567
Greenup	25.4	6,204	442
Hardin	31.3	19,666	667
Harlan	68.2	37,301	604
Hopkins	39.0	15,132	741
Jefferson	117.1	122,315	1,045
Kenton	25.3	36,423	1,439
Knox	30.9	9,506	358
Letcher	40.2	16,848	525
Lexington	55.4	85,039	1,535
Louisville	374.0	629,068	1,682
McCracken	16.6	11,622	700
Muhlenberg	32.7	14,905	591
Newport	31.5	38,777	1,231
Owensboro	34.6	42,281	1,222
Paducah	33.0	40,359	1,223
Perry	40.2	23,819	593
Pike	77.4	29,021	375
Pulaski	32.1	14,175	485

[a]Source: (57)

TABLE 56

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1951

District	Population SM[(a)] Estimates (in thousands)	Net Effective[(a)] Buying Income (in thousands)	Per Capita Income
Ashland	32.1	$ 40,248	$1,254
Boone	13.5	9,972	898
Bowling Green	18.1	18,466	1,020
Campbell	14.3	19,413	1,361
Carter	22.8	10,882	477
Christian	24.9	13,941	650
Clay	23.5	5,281	225
Covington	66.4	105,637	1,591
Daviess	24.4	23,867	978
Fayette	46.2	83,189	1,801
Floyd	54.7	30,457	609
Greenup	25.5	6,681	477
Hardin	56.3	42,857	806
Harlan	68.0	39,709	649
Hopkins	39.1	26,128	759
Jefferson	116.7	207,122	1,775
Kenton	26.2	44,157	1,687
Knox	30.9	10,288	384
Letcher	40.2	18,111	562
Lexington	56.8	94,092	1,657
Louisville	376.1	619,284	1,647
McCracken	19.6	14,720	751
Muhlenberg	32.3	15,169	636
Newport	31.7	42,110	1,328
Owensboro	35.0	46,181	1,319
Paducah	40.0	52,778	1,319
Perry	40.0	25,494	637
Pike	78.6	31,816	405
Pulaski	32.0	15,167	521

(a)Source: (58)

TABLE 57

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1952

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	32.3	$ 53,134	$1,645
Boone	13.5	12,517	1,120
Bowling Green	18.2	18,128	996
Campbell	14.7	24,987	1,704
Carter	22.1	16,301	738
Christian	21.1	15,026	710
Clay	23.1	13,279	525
Covington	66.6	112,288	1,686
Daviess	21.3	21,623	1,015
Fayette	47.6	74,740	1,570
Floyd	53.9	45,795	929
Greenup	25.1	15,396	1,129
Hardin	56.2	43,282	811
Harlan	66.6	69,624	1,063
Hopkins	38.5	30,881	948
Jefferson	104.4	195,729	1,875
Kenton	26.1	48,391	1,853
Knox	30.3	15,205	575
Letcher	39.5	25,362	804
Lexington	54.9	71,425	1,301
Louisville	392.3	660,492	1,684
McCracken	33.1	36,454	1,101
Muhlenberg	31.3	15,169	623
Newport	31.7	49,515	1,562
Owensboro	37.7	54,237	1,439
Paducah	50.5	68,882	1,364
Perry	39.2	36,962	943
Pike	78.2	79,788	1,020
Pulaski	31.1	15,168	534

[a] Source: (59)

TABLE 58

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1953

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
.shland	32.0	$ 47,424	$1,482
Boone	13.7	12,403	1,092
Bowling Green	18.7	22,552	1,206
Campbell	14.8	22,952	1,548
Carter	21.7	14,918	687
Christian	26.3	26,483	1,006
Clay	22.9	11,907	520
Covington	65.3	101,542	1,555
Daviess	19.5	18,867	968
Fayette	47.5	78,477	1,652
Floyd	53.7	35,985	737
Greenup	25.0	13,456	977
Hardin	52.8	65,046	1,304
Harlan	65.9	57,336	957
Hopkins	38.3	35,696	1,105
Jefferson	106.6	196,400	1,842
Kenton	42.2	44,414	1,627
Knox	30.1	16,308	628
Letcher	39.2	22,636	723
Lexington	55.7	76,142	1,367
Louisville	398.9	660,578	1,656
McCracken	34.2	39,049	1,142
Muhlenberg	30.7	17,370	739
Newport	31.4	44,588	1,420
Owensboro	39.6	56,588	1,429
Paducah	55.7	79,595	1,429
Perry	38.7	27,288	705
Pike	76.7	59,420	775
Pulaski	30.6	16,639	593

[a]Source: (60)

TABLE 59

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1954

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	32.5	$ 51,639	$1,589
Boone	14.8	13,424	1,093
Bowling Green	22.1	28,560	1,292
Campbell	16.4	24.915	1,519
Carter	21.3	14,524	682
Christian	24.7	26,423	1,071
Clay	21.1	10,943	519
Covington	66.5	106,656	1,604
Daviess	20.4	18,803	921
Fayette	50.7	74,963	1,478
Floyd	48.8	32,248	731
Greenup	24.4	13,389	980
Hardin	53.7	71,743	1,402
Harlan	63.1	50,985	889
Hopkins	38.4	36,160	1,112
Jefferson	125.9	195,180	1,550
Kenton	30.4	51,433	1,690
Knox	28.3	16,113	628
Letcher	36.8	21,239	715
Lexington	56.9	87,076	1,530
Louisville	405.2	715,424	1,766
McCracken	33.7	39,776	1,180
Muhlenberg	30.0	16,807	739
Newport	31.7	48,000	1,514
Owensboro	40.3	59,156	1,468
Paducah	50.3	71,388	1,419
Perry	35.5	21,862	616
Pike	73.3	52,135	711
Pulaski	29.5	16,363	605

[a]Source: (61)

TABLE 60

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1955

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	33.4	$ 51,106	$1,530
Boone	16.7	15,577	1,105
Bowling Green	22.7	30,227	1,332
Campbell	17.4	25,524	1,459
Carter	24.2	17,400	719
Christian	44.2	49,896	1,130
Clay	19.8	11,150	563
Covington	68.1	105,989	1,556
Daviess	20.8	19,320	929
Fayette	60.6	92,721	1,530
Floyd	42.9	32,827	765
Greenup	28.7	15,554	985
Hardin	52.2	71,647	1,447
Harlan	62.9	50,706	885
Hopkins	41.9	40,528	1,137
Jefferson	155.6	242,756	1,560
Kenton	31.2	50,510	1,619
Knox	26.2	15,947	673
Letcher	30.6	18,567	753
Lexington	57.9	91,152	1,574
Louisville	412.4	720,330	1,747
McCracken	24.6	28,609	1,162
Muhlenberg	29.4	16,968	774
Newport	32.3	47,545	1,472
Owensboro	40.5	59,089	1,459
Paducah	48.8	70,653	1,448
Perry	28.6	17,441	609
Pike	62.6	44,489	711
Pulaski	25.4	14,554	624

[a]Source: (62)

TABLE 61

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1956

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	33.8	$ 53,132	$1,572
Boone	18.5	17,994	1,138
Bowling Green	27.6	37,978	1,376
Campbell	19.0	28,740	1,509
Carter	20.5	15,231	743
Christian	30.1	35,122	1,165
Clay	18.3	10,676	583
Covington	68.4	109,888	1,607
Daviess	21.1	20,005	948
Fayette	61.3	97,117	1,584
Floyd	39.4	31,069	789
Greenup	26.5	21,905	1,013
Hardin	68.0	96,565	1,496
Harlan	59.2	46,968	909
Hopkins	40.5	40,392	1,176
Jefferson	161.0	260,588	1,618
Kenton	37.7	62,853	1,669
Knox	24.6	15,555	697
Letcher	28.4	17,930	778
Lexington	58.8	95,889	1,631
Louisville	419.3	757,352	1,808
McCracken	29.6	36,616	1,237
Muhlenberg	27.9	16,557	801
Newport	32.4	49,124	1,516
Owensboro	43.0	64,693	1,504
Paducah	48.1	71,999	1,497
Perry	28.2	17,710	628
Pike	61.7	45,130	731
Pulaski	26.5	15,765	650

[a]Source: (63)

TABLE 62

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1957

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	34.0	$ 54,540	$1,604
Boone	19.5	20,044	1,193
Bowling Green	27.1	28,810	1,432
Campbell	19.6	30,072	1,536
Carter	20.0	15,721	786
Christian	41.7	51,154	1,226
Clay	18.3	11,345	620
Covington	70.0	115,907	1,656
Daviess	23.9	23,993	1,004
Fayette	57.0	87,915	1,529
Floyd	43.1	35,733	829
Greenup	27.6	16,025	1,066
Hardin	65.5	100,315	1,590
Harlan	55.2	47,909	954
Hopkins	40.7	42,083	1,218
Jefferson	175.1	286,309	1,632
Kenton	39.5	66,756	1,692
Knox	25.5	17,038	740
Letcher	29.6	19,742	819
Lexington	64.1	109,258	1,704
Louisville	415.1	758,537	1,827
McCracken	21.6	26,406	1,222
Muhlenberg	28.1	17,739	853
Newport	33.1	52,036	1,572
Owensboro	46.1	71,085	1,542
Paducah	47.5	73,029	1,537
Perry	30.9	21,074	682
Pike	63.7	49,578	778
Pulaski	24.6	15,498	693

[a]Source: (64)

TABLE 63

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1958

District	Population SM[(a)] Estimates (in thousands)	Net Effective[(a)] Buying Income (in thousands)	Per Capita Income
Ashland	34.5	$ 52,211	$1,513
Boone	20.8	21,880	1,205
Bowling Green	30.1	40,489	1,345
Campbell	24.4	36,119	1,477
Carter	19.7	16,843	855
Christian	34.3	41,937	1,223
Clay	21.8	15,155	695
Covington	70.1	110,692	1,579
Daviess	16.1	26,898	1,050
Fayette	59.0	86,559	1,467
Floyd	43.7	36,916	845
Greenup	28.0	16,166	1,075
Hardin	65.2	95,003	1,520
Harlan	52.7	44,227	923
Hopkins	40.9	41,791	1,202
Jefferson	170.3	262,570	1,541
Kenton	42.6	69,000	1,619
Knox	26.3	19,101	800
Letcher	29.1	19,888	833
Lexington	64.9	103,935	1,601
Louisville	417.1	716,875	1,719
McCracken	12.8	15,098	1,179
Muhlenberg	27.3	17,634	879
Newport	33.2	49,968	1,505
Owensboro	50.4	72,415	1,437
Paducah	47.6	69,049	1,451
Perry	29.9	21,021	703
Pike	64.2	51,190	797
Pulaski	27.5	20,551	825

[(a)]Source: (65)

TABLE 64

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1959

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	34.5	$ 55,918	$1,621
Boone	22.5	27,103	1,281
Bowling Green	32.0	45,013	1,407
Campbell	22.8	36,315	1,591
Carter	22.3	20,079	900
Christian	35.5	47,294	1,332
Clay	24.3	17,695	728
Covington	70.0	118,974	1,700
Daviess	12.0	13,339	1,112
Fayette	60.1	92,932	1,550
Floyd	45.4	40,854	900
Greenup	28.1	17,073	1,150
Hardin	6[illegible].0	101,623	1,535
Harlan	45.7	41,353	1,000
Hopkins	40.2	44,366	1,290
Jefferson	170.5	279,913	1,641
Kenton	42.0	72,905	1,737
Knox	27.7	21,3[illegible]6	851
Letcher	27.5	20,286	897
Lexington	65.3	110,344	1,690
Louisville	412.5	754,406	1,829
McCracken	10.7	13,427	1,254
Muhlenberg	28.1	20,350	943
Newport	33.1	53,553	1,618
Owensboro	54.5	82,021	1,505
Paducah	46.5	72,083	1,550
Perry	28.7	21,779	759
Pike	62.9	54,519	867
Pulaski	26.6	21,392	888

[a]Source: (66)

TABLE 65

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1960

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	31.2	$ 54,628	$1,751
Boone	22.6	26,850	1,344
Bowling Green	31.5	48,723	1,547
Campbell	24.6	43,783	1,778
Carter	20.7	18,760	906
Christian	37.9	54,681	1,443
Clay	20.6	14,799	718
Covington	59.7	110,128	1,845
Daviess	26.4	31,214	1,182
Fayette	69.0	116,117	1,683
Floyd	40.8	38,672	948
Greenup	29.6	18,401	1,208
Hardin	59.1	102,170	1,805
Harlan	45.4	44,412	1,083
Hopkins	38.4	44,585	1,364
Jefferson	226.6	408,578	1,803
Kenton	42.1	79,564	1,892
Knox	24.9	19,431	864
Letcher	29.4	22,285	925
Lexington	65.1	119,895	1,842
Louisville	390.6	773,066	1,979
McCracken	23.4	31,325	1,338
Muhlenberg	27.4	20,054	1,007
Newport	29.9	52,813	1,766
Owensboro	45.1	75,139	1,666
Paducah	34.4	58,166	1,691
Perry	28.2	23,509	834
Pike	62.7	57,415	916
Pulaski	27.0	21,285	875

[a]Source: (67)

TABLE 66

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME
FOR EACH SCHOOL DISTRICT FOR 1961

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	31.3	$ 57,199	$1,827
Boone	23.5	35,339	1,698
Bowling Green	31.0	52,073	1,680
Campbell	25.8	51,960	2,012
Carter	20.5	18,216	899
Christian	40.0	55,182	1,380
Clay	20.4	12,288	602
Covington	59.6	99,512	1,670
Daviess	27.1	32,928	1,215
Fayette	72.8	154,363	2,120
Floyd	39.5	33,283	843
Greenup	30.0	18,606	1,215
Hardin	61.6	91,000	1,534
Harlan	43.5	34,567	882
Hopkins	38.5	44,810	1,368
Jefferson	242.5	498,250	2,054
Kenton	43.9	85,494	1,948
Knox	24.4	19,280	738
Letcher	28.5	20,564	875
Lexington	65.1	107,625	1,653
Louisville	390.6	716,068	1,833
McCracken	24.1	37,825	1,569
Muhlenberg	27.0	22,320	1,154
Newport	29.9	48,082	1,608
Owensboro	45.8	81,021	1,769
Paducah	34.5	61,668	1,787
Perry	27.2	20,136	740
Pike	61.5	48,782	793
Pulaski	26.6	19,878	839

[a]Source: (68)

TABLE 67

PER CAPITA AND TOTAL NET EFFECTIVE BUYING INCOME FOR EACH SCHOOL DISTRICT FOR 1962

District	Population SM[a] Estimates (in thousands)	Net Effective[a] Buying Income (in thousands)	Per Capita Income
Ashland	31.3	$ 60,601	$1,936
Boone	24.3	38,483	1,791
Bowling Green	31.1	55,599	1,788
Campbell	26.2	55,860	2,131
Carter	20.3	19,150	943
Christian	41.1	59,618	1,451
Clay	20.1	13,007	647
Covington	59.2	103,953	1,756
Daviess	28.2	36,189	1,283
Fayette	73.4	165,436	2,254
Floyd	38.3	34,412	898
Greenup	30.4	19,387	1,284
Hardin	63.2	97,522	1,601
Harlan	42.3	36,643	949
Hopkins	40.2	59,246	1,466
Jefferson	253.9	554,721	2,184
Kenton	45.0	92,899	2,064
Knox	23.8	16,879	789
Letcher	27.5	21,196	932
Lexington	64.9	113,790	1,753
Louisville	394.7	767,481	1,944
McCracken	24.5	40,602	1,657
Muhlenberg	26.5	22,737	1,224
Newport	29.9	50,592	1,692
Owensboro	46.5	87,430	1,880
Paducah	35.3	67,038	1,899
Perry	26.3	21,925	834
Pike	59.5	51,505	866
Pulaski	26.2	21,764	931

[a]Source: (69)

TABLE 68

MATRIX OF CORRELATIONS AMONG INDEPENDENT VARIABLES FOR 1950

Variable	2	3	4	5	6	7	8	9	10	11
1	.18	.03	-.36	.02	.13	.25	.17	.33	-.02	-.14
2		-.78	-.10	-.57	.13	.7[illegible]	.49	.72	-.78	-.84
3			-.05	.47	.09	-.50	-.48	-.58	.70	.70
4				.08	-.18	.15	.02	-.24	.01	.23
5					-.17	-.55	-.53	-.36	.38	.66
6						.11	.15	.30	-.16	-.38
7							.61	.45	-.65	-.69
8								.37	-.41	-.51
9									-.78	-.71
10										.73
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										

TABLE 68 Extension

12	13	14	15	16	17	18	19	20	21	22
.06	-.09	.03	.04	.09	.21	.26	-.29	.04	.94	.05
.70	.82	.87	.62	.75	.68	.45	.57	-.28	.39	.27
-.39	-.72	-.83	-.63	-.63	-.45	-.29	-.64	.60	-.25	-.57
-.14	.16	.05	.07	.11	-.19	.02	.24	-.02	-.27	.07
-.53	-.71	-.59	-.[illegible]7	-.65	-.39	-.32	-.48	-.[illegible]8	-.08	-.46
.38	.13	.14	.09	-.04	.08	-.01	.08	.38	.08	-.34
.52	.68	.73	.45	.83	.49	.67	.35	-.05	.34	.32
.29	.54	.59	.02	.69	-.01	.72	.49	.16	.29	.30
.51	.47	.72	.61	.40	.51	.31	.41	-.12	.49	.05
-.67	-.60	-.89	-.75	-.55	-.56	-.39	-.65	.17	-.22	-.03
-.68	-.75	-.83	-.[illegible]9	-.62	-.69	-.31	-.43	.19	-.26	-.25
	.61	.69	.6[illegible]	.45	.65	.20	.66	.15	.16	-.19
		.79	.46	.86	.50	.45	.61	-.10	.12	.49
			.73	.71	.58	.45	.71	-.24	.25	.30
				.26	.77	-.03	.54	-.38	.2[illegible]	.05
					.28	.78	.47	-.08	.24	.55
						-.07	.25	-.27	.29	.04
							.26	.14	.32	.22
								.03	-.03	.06
									-.17	-.45
										.16

TABLE 69

MATRIX OF CORRELATIONS AMONG INDEPENDENT VARIABLES FOR 1960

X Variable	2	3	4	5	6	7	8	9	10	11
1	.29	.06	-.04	-.17	-.01	.36	.34	.29	-.18	-.29
2		-.79	.23	-.80	-.71	.81	.52	.68	-.82	-.60
3			-.14	.56	.72	-.50	-.40	-.54	.69	.24
4				.05	-.19	.22	.34	-.09	-.08	-.09
5					.62	-.77	-.26	-.56	.68	.54
6						-.69	-.36	-.30	.71	.11
7							.32	.49	-.77	-.54
8								.45	-.46	-.34
9									-.78	-.56
10										.43
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										

TABLE 69 Extension

12	13	14	15	16	17	18	19	20	21	22
.11	.16	.15	.12	.25	.23	.07	-.07	-.23	.91	.01
.26	.77	.85	.55	.61	.84	-.66	.27	-.50	.43	.53
-.03	-.51	-.74	-.51	-.40	-.59	.61	-.25	.65	-.21	-.57
-.10	.45	.25	-.02	.30	.20	-.37	-.03	.05	-.04	.34
-.42	-.62	-.70	-.51	-.48	-.84	.52	-.25	.26	-.27	-.51
-.26	-.66	-.75	-.50	-.54	-.73	.66	-.38	.43	-.14	-.72
.56	.81	.79	.62	.72	.93	-.64	.26	-.37	.38	.63
.05	.45	.58	-.06	.67	.24	-.18	.3	-.04	.42	.33
.29	.44	.69	.48	.48	.47	-.33	.39	-.36	.47	.16
-.46	-.67	-.92	-.69	-.70	-.75	.57	-.61	.46	-.30	-.44
-.46	-.41	-.48	-.11	-.39	-.49	.37	-.06	.14	-.79	-.03
	.32	.40	.47	.36	.56	-.32	.42	.13	.07	.15
		.77	.45	.83	.76	-.61	.20	-.14	.20	.69
			.60	.77	.77	-.67	.48	-.47	.28	.60
				.28	.73	-.47	.36	-.42	.21	.37
					.54	-.34	.35	-.12	.28	.60
						-.72	.26	-.34	.30	.61
							-.14	.42	.00	-.50
								.01	.03	.07
									-.36	-.26
										.07

TABLE 70

ESTIMATED 100 PER CENT EQUALIZED VALUATION[a]
(in thousands)

District	Real Property	Personal Property	Franchise Property	Shares	Total
Ashland	$ 126,638	$ 24,852	$ 12,690	$ 823	$ 165,003
Boone	87,533	10,703	16,102	193	114,531
Bowling Green	82,069	16,423	7,338	548	106,378
Campbell	83,278	6,667	13,742	75	103,762
Carter	24,828	7,378	20,239	278	52,721
Christian	65,336	11,651	7,484	30	84,501
Clay	23,995	5,798	3,698	108	33,599
Covington	168,825	27,467	18,386	898	215,826
Daviess	125,694	12,758	19,781		158,233
Fayette	467,859	52,604	33,355	126	553,944
Floyd	48,340	16,896	38,009	294	103,519
Greenup	24,567	4,034	22,777		51,378
Hardin	74,598	9,972	11,013	115	95,698
Harlan	48,845	14,542	9,329	63	72,779
Hopkins	96,777	25,297	22,491	533	145,098
Jefferson	1,496,838	188,551	103,368	462	1,789,190
Kenton	146,538	15,363	19,438	49	181,388
Knox	21,500	3,646	6,416		31,562
Letcher	27,794	14,182	6,652	185	48,813
Lexington	213,060	50,526	30,705	3,923	298,214
Louisville	1,343,316	243,895	155,289	25,326	1,767,826
McCracken	54,872	12,774	14,619		82,265
Muhlenberg	43,441	15,977	15,542		74,930
Newport	94,260	12,918	5,724	492	113,394

TABLE 70 Continued

District	Real Property	Personal Property	Franchise Property	Shares	Total
Owensboro	$ 154,599	$ 25,505	$ 11,218	$ 1,022	$ 192,344
Paducah	99,348	27,152	19,796	685	146,981
Perry	22,811	10,053	7,246		40,110
Pike	83,624	23,867	50,511		158,002
Pulaski	37,331	4,648	9,126	33	51,138

(a)Source: (35)

TABLE 71

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1945-1946

District	Average Daily Attendance 1-12[a]	Total Revenue Receipts Per Pupil in ADA
Ashland	5,120	$53.49
Boone	1,386	58.51
Bowling Green	2,007	55.80
Campbell	1,133	62.55
Carter	4,745	22.58
Christian	2,843	31.38
Clay	3,763	11.93
Covington	5,625	120.03
Daviess	2,632	42.00
Fayette	4,221	82.97
Floyd	9,764	21.51
Greenup	2,482	22.11
Hardin	3,180	29.22
Harlan	11,704	13.24
Hopkins	3,198	28.07
Jefferson	9,295	90.66
Kenton	2,245	68.40
Knox	4,457	11.72
Letcher	6,326	13.34
Lexington	5,726	82.59
Louisville	33,515	97.71
McCracken	2,249	33.03
Muhlenberg	4,125	14.28
Newport	2,830	107.97
Owensboro	3,749	96.13
Paducah	4,091	66.38
Perry	7,243	12.56
Pike	13,218	19.41
Pulaski	4,878	15.49

[a] Source: (25)

TABLE 72

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1946-1947

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,120	$ 55.19
Boone	1,474	75.25
Bowling Green	2,106	55.36
Campbell	1,209	72.89
Carter	4,997	21.75
Christian	2,881	48.95
Clay	4,245	10.81
Covington	5,457	131.32
Daviess	2,766	58.72
Fayette	4,355	96.79
Floyd	10,048	40.90
Greenup	2,737	39.45
Hardin	3,254	41.09
Harlan	12,405	19.63
Hopkins	3,383	38.89
Jefferson	10,136	119.54
Kenton	2,302	67.41
Knox	4,805	10.69
Letcher	6,808	13.62
Lexington	5,720	102.91
Louisville	33,020	120.25
McCracken	2,461	62.15
Muhlenberg	4,585	26.52
Newport	2,783	114.29
Owensboro	3,785	31.38
Paducah	4,235	74.51
Perry	7,879	12.32
Pike	14,852	32.42
Pulaski	5,675	12.78

(a) Source: (26)

TABLE 73

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1947-1948

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,166	$ 71.86
Boone	1,546	99.91
Bowling Green	2,109	72.41
Campbell	1,797	98.18
Carter	5,075	30.69
Christian	2,960	59.11
Clay	4,073	16.66
Covington	5,380	126.11
Daviess	2,795	69.66
Fayette	4,555	124.27
Floyd	10,147	44.38
Greenup	2,731	39.50
Hardin	3,603	57.73
Harlan	12,559	24.53
Hopkins	3,380	54.07
Jefferson	11,021	142.41
Kenton	2,447	104.77
Knox	4,887	11.44
Letcher	7,000	21.57
Lexington	5,651	113.93
Louisville	33,350	171.58
McCracken	2,543	58.99
Muhlenberg	4,554	28.28
Newport	2,721	137.12
Owensboro	3,375	97.33
Paducah	4,327	44.61
Perry	7,931	19.25
Pike	15,424	35.70
Pulaski	5,324	18.72

(a)Source: (26)

TABLE 74

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1948-1949

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,244	$ 76.23
Boone	1,610	108.57
Bowling Green	2,201	74.56
Campbell	1,293	99.57
Carter	5,129	31.48
Christian	3,053	59.30
Clay	2,419	25.97
Covington	5,005	148.49
Daviess	2,735	81.64
Fayette	4,931	150.71
Floyd	10,780	39.28
Greenup	2,791	40.88
Hardin	3,794	57.47
Harlan	13,030	26.34
Hopkins	3,454	55.68
Jefferson	12,113	158.32
Kenton	2,601	109.18
Knox	4,862	11.47
Letcher	7,209	26.36
Lexington	5,559	150.11
Louisville	34,324	195.60
McCracken	2,612	61.04
Muhlenberg	4,553	30.58
Newport	2,802	142.93
Owensboro	3,783	96.45
Paducah	4,386	119.71
Perry	8,559	22.57
Pike	16,344	38.88
Pulaski	5,536	21.82

(a)Source: (27)

TABLE 75

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1949-1950

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,286	$ 79.71
Boone	1,747	109.00
Bowling Green	2,130	87.96
Campbell	1,339	106.88
Carter	5,220	34.00
Christian	3,177	60.11
Clay	4,500	24.19
Covington	5,849	156.69
Daviess	2,830	85.29
Fayette	5,478	152.44
Floyd	11,277	40.62
Greenup	2,905	40.77
Hardin	3,986	55.98
Harlan	13,245	27.21
Hopkins	3,538	59.17
Jefferson	12,201	197.62
Kenton	2,749	124.08
Knox	5,026	18.87
Letcher	7,470	28.00
Lexington	5,626	184.82
Louisville	35,233	210.00
McCracken	2,696	64.17
Muhlenberg	4,976	34.54
Newport	2,843	144.65
Owensboro	3,857	105.13
Paducah	4,502	87.70
Perry	8,881	22.17
Pike	16,953	40.28
Pulaski	5,557	30.54

(a) Source: (27)

TABLE 76

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1950-1951

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,176	$ 90.87
Boone	1,804	111.38
Bowling Green	2,197	88.97
Campbell	1,404	109.33
Carter	5,004	34.83
Christian	3,173	62.76
Clay	4,688	22.23
Covington	9,483	171.74
Daviess	2,922	99.29
Fayette	5,616	164.49
Floyd	10,808	42.33
Greenup	2,747	46.67
Hardin	3,895	58.58
Harlan	13,029	26.94
Hopkins	3,473	61.75
Jefferson	1[illegible],963	169.84
Kenton	2,860	129.00
Knox	4,917	22.81
Letcher	7,327	27.89
Lexington	5,588	179.17
Louisville	35,229	206.13
McCracken	2,760	66.26
Muhlenberg	4,850	39.78
Newport	2,898	148.35
Owensboro	4,17[illegible]	108.50
Paducah	4,566	106.62
Perry	8,544	23.69
Pike	16,619	41.24
Pulaski	5,314	32.14

(a)Source: (28)

TABLE 77

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1951-1952

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,257	$ 97.51
Boone	1,857	127.71
Bowling Green	2,273	94.45
Campbell	1,466	111.88
Carter	5,047	39.86
Christian	3,145	75.27
Clay	4,661	23.07
Covington	5,505	198.57
Daviess	3,075	102.02
Fayette	5,792	225.73
Floyd	10,732	42.95
Greenup	2,841	50.70
Hardin	3,971	64.02
Harlan	13,022	28.94
Hopkins	5,505	66.49
Jefferson	16,106	183.41
Kenton	3,065	132.08
Knox	4,989	24.41
Letcher	7,114	32.17
Lexington	5,505	189.06
Louisville	35,517	219.73
McCracken	3,730	56.87
Muhlenberg	4,788	42.22
Newport	2,852	157.02
Owensboro	4,285	114.65
Paducah	4,859	101.71
Perry	8,459	25.86
Pike	16,867	41.62
Pulaski	5,063	37.37

(a) Source: (28)

TABLE 78

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1952-1953

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,351	$101.63
Boone	2,010	118.16
Bowling Green	2,416	103.17
Campbell	1,644	120.38
Carter	4,973	41.76
Christian	3,251	80.17
Clay	4,610	23.73
Covington	5,775	187.45
Daviess	3,327	77.04
Fayette	6,461	181.34
Floyd	10,834	39.11
Greenup	2,984	50.98
Hardin	4,074	62.92
Harlan	12,970	28.79
Hopkins	5,695	66.67
Jefferson	18,358	169.81
Kenton	3,396	135.00
Knox	4,952	23.90
Letcher	7,010	34.63
Lexington	5,808	188.04
Louisville	37,449	206.16
McCracken	4,997	49.70
Muhlenberg	4,909	41.96
Newport	2,949	158.50
Owensboro	4,654	130.70
Paducah	5,336	121.73
Perry	8,270	27.76
Pike	17,271	41.72
Pulaski	5,118	35.54

(a)Source: (29)

TABLE 79

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1953-1954

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,579	$101.57
Boone	2,214	122.45
Bowling Green	2,623	98.66
Campbell	1,780	120.03
Carter	4,985	25.19
Christian	3,246	90.62
Clay	4,560	24.91
Covington	6,093	185.37
Daviess	3,599	97.12
Fayette	7,109	184.78
Floyd	10,661	43.57
Greenup	3,256	51.70
Hardin	4,072	71.65
Harlan	12,912	28.62
Hopkins	5,810	66.89
Jefferson	21,274	169.98
Kenton	3,714	128.53
Knox	4,854	25.83
Letcher	7,004	34.61
Lexington	6,171	180.33
Louisville	39,381	198.96
McCracken	4,862	80.32
Muhlenberg	4,938	44.88
Newport	3,214	158.16
Owensboro	5,025	112.65
Paducah	5,923	120.51
Perry	8,265	26.00
Pike	17,252	41.73
Pulaski	5,177	37.11

(a) Source: (29)

TABLE 80

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1954-1955

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,659	$111.51
Boone	2,437	118.93
Bowling Green	2,740	97.67
Campbell	1,894	126.37
Carter	5,160	41.11
Christian	3,325	77.07
Clay	4,996	23.14
Covington	6,444	193.36
Daviess	3,669	103.86
Fayette	7,884	208.2.
Floyd	10,786	43.04
Greenup	3,503	54.00
Hardin	4,322	75.96
Harlan	12,946	28.90
Hopkins	6,033	91.29
Jefferson	24,977	218.86
Kenton	3,994	135.72
Knox	5,312	24.59
Letcher	7,039	33.32
Lexington	6,611	188.67
Louisville	41,011	259.03
McCracken	4,522	93.34
Muhlenberg	4,912	52.01
Newport	3,271	160.41
Owensboro	5,263	130.94
Paducah	5,872	141.70
Perry	8,162	24.71
Pike	17,469	43.35
Pulaski	5,293	31.59

(a)Source: (30)

TABLE 81

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1955-1956

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,675	$107.85
Boone	2,711	133.87
Bowling Green	2,847	97.77
Campbell	1,933	135.12
Carter	5,021	45.16
Christian	3,381	78.58
Clay	5,023	21.95
Covington	6,556	186.25
Daviess	3,849	104.22
Fayette	8,660	203.47
Floyd	11,846	38.53
Greenup	3,517	69.97
Hardin	4,680	75.33
Harlan	12,620	27.94
Hopkins	6,210	84.62
Jefferson	29,518	216.00
Kenton	4,262	133.13
Knox	5,203	26.06
Letcher	6,946	33.15
Lexington	6,858	211.40
Louisville	41,894	247.90
McCracken	4,118	99.44
Muhlenberg	4,850	51.43
Newport	3,535	172.34
Owensboro	5,509	128.95
Paducah	5,685	171.09
Perry	8,055	23.85
Pike	17,341	41.65
Pulaski	5,160	38.75

(a) Source: (30)

TABLE 82

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1956-1957

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,832	$125.59
Boone	2,989	129.90
Bowling Green	2,844	100.76
Campbell	2,059	133.46
Carter	4,899	50.87
Christian	3,422	81.85
Clay	4,877	22.86
Covington	6,795	196.74
Daviess	4,085	111.86
Fayette	9, 02	198.70
Floyd	11,945	43.32
Greenup	3,616	74.71
Hardin	4,846	73.85
Harlan	12,384	28.57
Hopkins	6,408	87.44
Jefferson	34,335	218.68
Kenton	4,684	130.80
Knox	5,276	25.58
Letcher	7,113	32.15
Lexington	7,146	202.01
Louisville	41,570	251.45
McCracken	4,182	96.78
Muhlenberg	4,807	54.79
Newport	3,602	186.56
Owensboro	5,676	131.96
Paducah	5,743	155.73
Perry	7,978	25.17
Pike	17,603	41.05
Pulaski	5,032	45.96

(a)Source: (31)

TABLE 83

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER
PUPIL IN AVERAGE DAILY ATTENDANCE
FOR THE SCHOOL YEAR 1957-1958

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,709	$118.93
Boone	3,158	114.35
Bowling Green	2,824	124.79
Campbell	2,128	133.12
Carter	4,788	40.70
Christian	3,373	92.63
Clay	4,945	25.35
Covington	6,776	203.22
Daviess	4,271	106.12
Fayette	10,030	193.04
Floyd	12,005	44.46
Greenup	3,640	56.24
Hardin	4,906	75.26
Harlan	12,014	29.54
Hopkins	6,422	87.29
Jefferson	37,312	228.62
Kenton	4,835	178.81
Knox	5,027	26.14
Letcher	7,069	34.87
Lexington	7,372	192.24
Louisville	41,253	259.11
McCracken	4,231	101.76
Muhlenberg	4,642	63.24
Newport	3,561	202.48
Owensboro	5,822	162.70
Paducah	5,777	156.21
Perry	7,705	25.51
Pike	17,712	42.59
Pulaski	4,883	40.88

(a)Source: (31)

TABLE 84

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1958-1959

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,862	$171.68
Boone	3,439	135.93
Bowling Green	2,979	124.55
Campbell	2,658	140.76
Carter	5,065	55.51
Christian	3,546	88.54
Clay	5,149	23.55
Covington	7,041	218.64
Daviess	4,508	107.79
Fayette	11,017	204.81
Floyd	12,085	47.96
Greenup	3,788	85.18
Hardin	5,365	65.20
Harlan	11,890	28.97
Hopkins	6,751	89.67
Jefferson	41,284	226.47
Kenton	5,098	176.72
Knox	5,259	24.51
Letcher	7,213	33.46
Lexington	7,736	220.12
Louisville	42,551	255.57
McCracken	4,474	99.88
Muhlenberg	4,765	68.67
Newport	3,586	210.81
Owensboro	6,017	167.49
Paducah	5,985	148.19
Perry	7,845	22.29
Pike	18,069	43.54
Pulaski	4,992	43.95

(a)Source: (32)

TABLE 85

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1959-1960

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,790	$168.65
Boone	3,648	134.47
Bowling Green	3,148	181.46
Campbell	2,846	200.10
Carter	4,880	48.89
Christian	4,337	69.82
Clay	5,111	23.49
Covington	7,028	202.91
Daviess	4,707	133.10
Fayette	12,206	196.49
Floyd	11,591	47.79
Greenup	3,768	79.22
Hardin	5,517	64.97
Harlan	10,969	29.57
Hopkins	6,770	84.11
Jefferson	45,129	219.06
Kenton	5,381	175.33
Knox	5,111	23.91
Letcher	6,853	34.65
Lexington	7,886	215.68
Louisville	42,604	253.43
McCracken	4,652	98.46
Muhlenberg	4,656	71.11
Newport	3,539	204.18
Owensboro	6,003	170.70
Paducah	5,954	172.65
Perry	7,744	25.75
Pike	17,348	46.25
Pulaski	4,998	45.08

(a)Source: (32)

TABLE 86

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER
PUPIL IN AVERAGE DAILY ATTENDANCE
FOR THE SCHOOL YEAR 1960-1961

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,857	$168.93
Boone	3,956	133.94
Bowling Green	3,312	111.89
Campbell	2,974	191.74
Carter	4,870	51.12
Christian	4,460	72.93
Clay	5,153	24.36
Covington	7,137	217.77
Daviess	4,902	139.00
Fayette	13,322	198.89
Floyd	11,516	46.62
Greenup	3,780	85.36
Hardin	5,735	65.05
Harlan	10,542	29.83
Hopkins	6,867	113.50
Jefferson	48,502	221.38
Kenton	5,622	176.65
Knox	5,054	25.12
Letcher	6,825	33.65
Lexington	8,238	203.65
Louisville	43,246	254.82
McCracken	4,813	98.04
Muhlenberg	4,653	71.52
Newport	3,565	194.41
Owensboro	6,229	188.47
Paducah	6,009	165.42
Perry	7,494	23.62
Pike	17,027	46.85
Pulaski	5,026	45.48

(a)Source: (33)

TABLE 87

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1961-1962

District	Average Daily Attendance 1-12(a)	Total Revenue Receipts Per Pupil in ADA
Ashland	5,899	$169.85
Boone	4,256	130.52
Bowling Green	4,554	109.01
Campbell	3,161	191.05
Carter	4,806	51.27
Christian	4,552	75.64
Clay	5,114	26.34
Covington	7,326	215.09
Daviess	5,073	135.56
Fayette	14,432	200.41
Floyd	11,522	45.36
Greenup	3,860	79.97
Hardin	5,833	63.94
Harlan	9,998	30.22
Hopkins	6,867	111.45
Jefferson	51,396	222.44
Kenton	5,963	171.44
Knox	5,042	24.90
Letcher	6,734	34.72
Lexington	8,569	193.44
Louisville	43,996	251.48
McCracken	4,956	95.93
Muhlenberg	4,627	72.18
Newport	3,540	226.55
Owensboro	6,421	185.29
Paducah	6,076	171.92
Perry	7,277	23.49
Pike	16,719	46.83
Pulaski	5,009	46.38

(a) Source: (33)

TABLE 88

TOTAL LOCAL SCHOOL REVENUE RECEIPTS PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SCHOOL YEAR 1962-1963

District	Average Daily Attendance 1-12[a]	Total Revenue Receipts Per Pupil in ADA
Ashland	5,976	$160.29
Boone	4,601	142.85
Bowling Green	3,896	150.58
Campbell	3,335	184.92
Carter	4,733	52.16
Christian	4,983	70.94
Clay	5,063	26.69
Covington	7,292	204.24
Daviess	5,293	135.93
Fayette	15,388	254.91
Floyd	11,236	44.96
Greenup	3,813	80.85
Hardin	5,966	64.87
Harlan	9,487	30.76
Hopkins	7,009	106.32
Jefferson	55,347	267.11
Kenton	6,191	172.65
Knox	4,952	24.52
Letcher	6,592	34.88
Lexington	8,921	202.10
Louisville	44,875	235.53
McCracken	5,132	93.08
Muhlenberg	4,621	73.15
Newport	3,647	205.29
Owensboro	6,638	212.23
Paducah	6,071	166.65
Perry	6,968	25.17
Pike	16,494	46.48
Pulaski	5,049	44.18

[a]Source: (34)

APPENDIX B

Figures 1-35

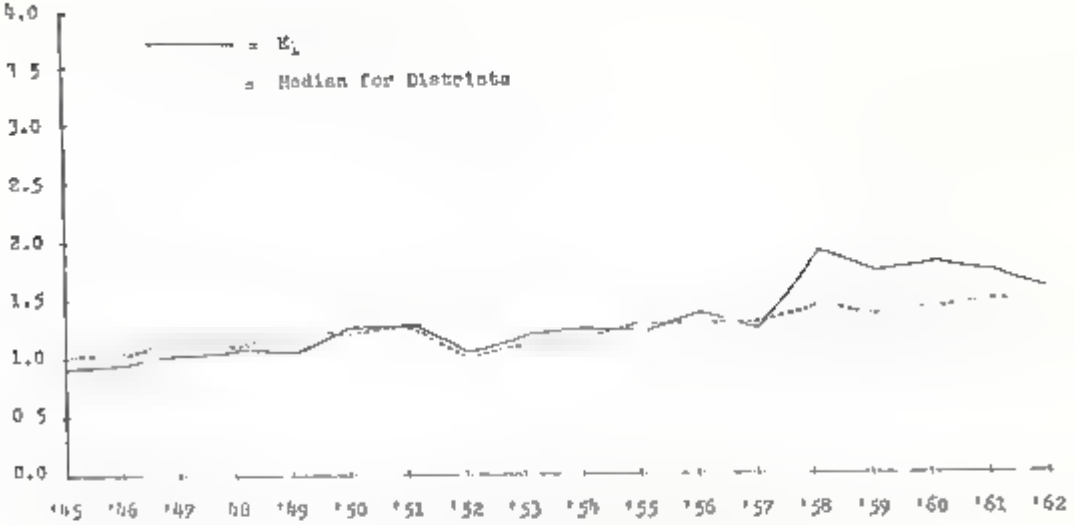


Figure 1

Local Financial Effort in Ashland

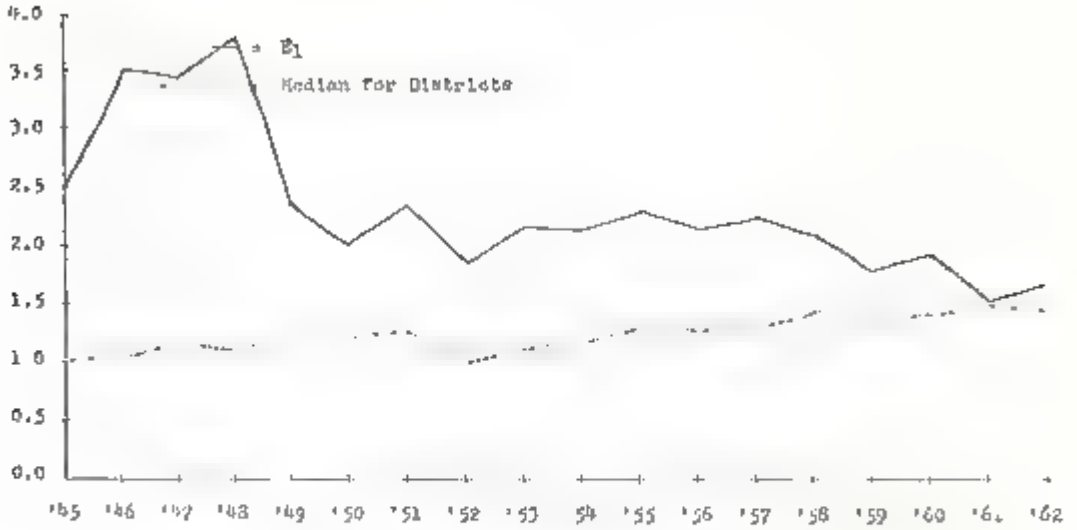


Figure 2

Local Financial Effort in Boone

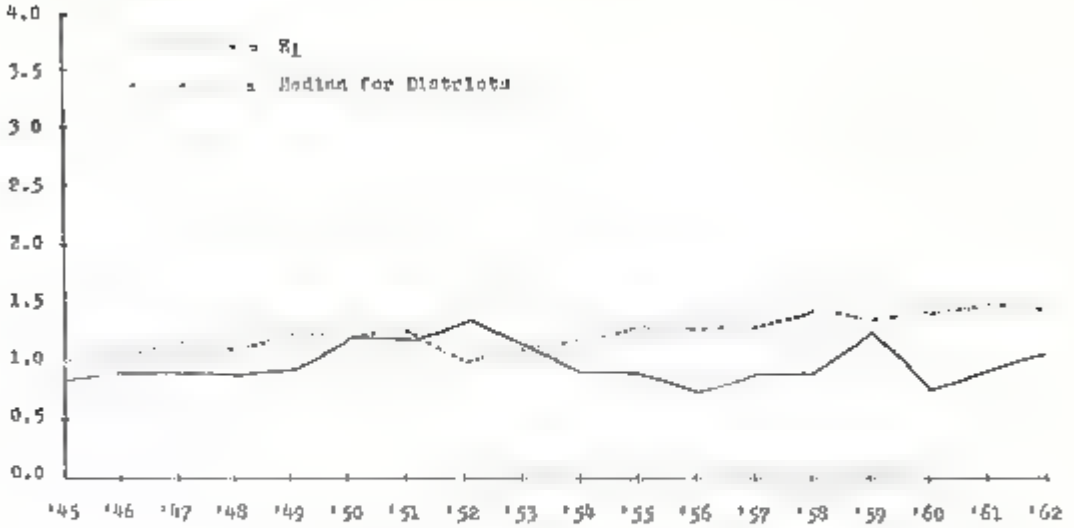


Figure 3

Trend Ratios in Effects in Dublin, 1945-62

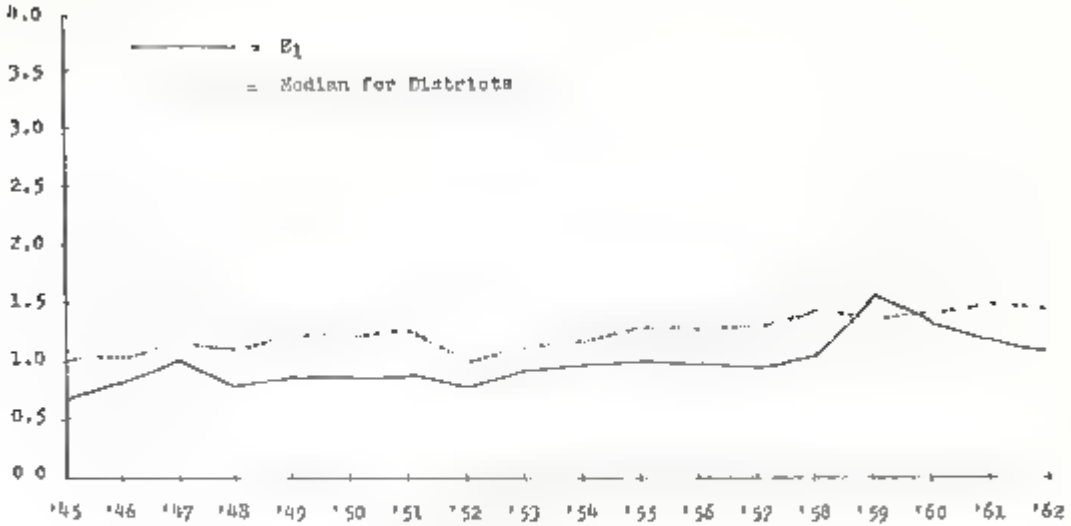


Figure 4

Local Financial Effort in Chapbell

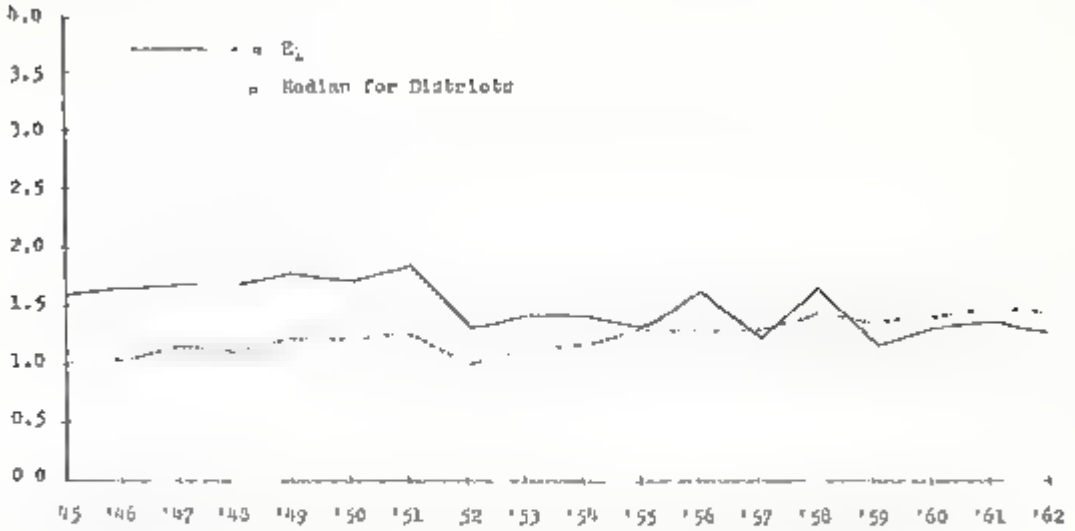


Figure 5

Local Financial Effort in Carter

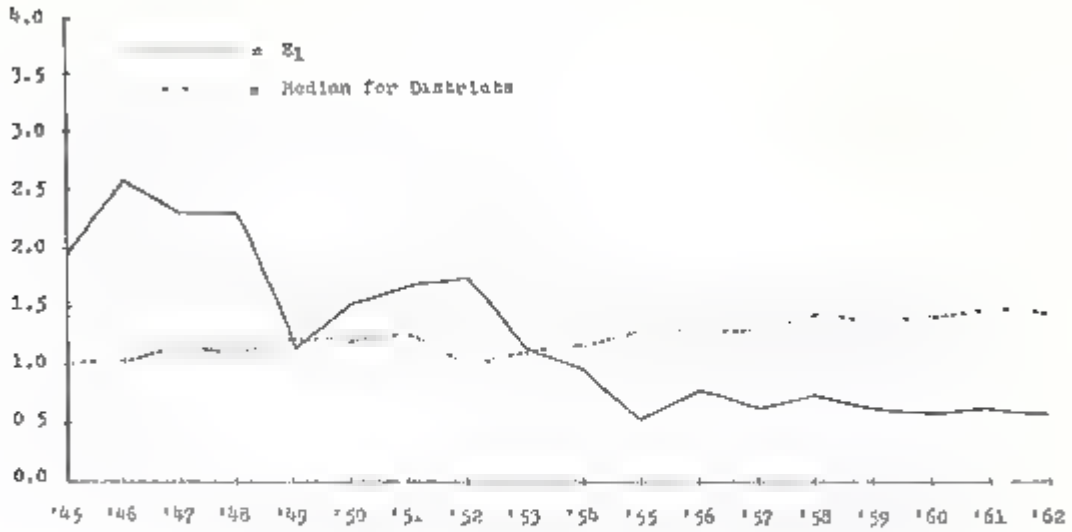


Figure 6

Local Financial Effort in Christian

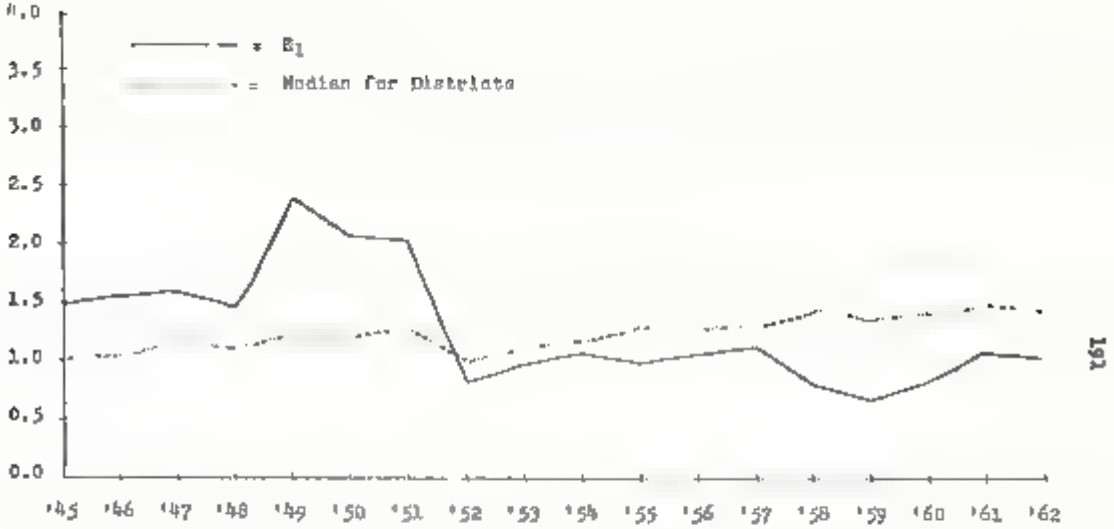


Figure 7

Local Financial Effort in Clay

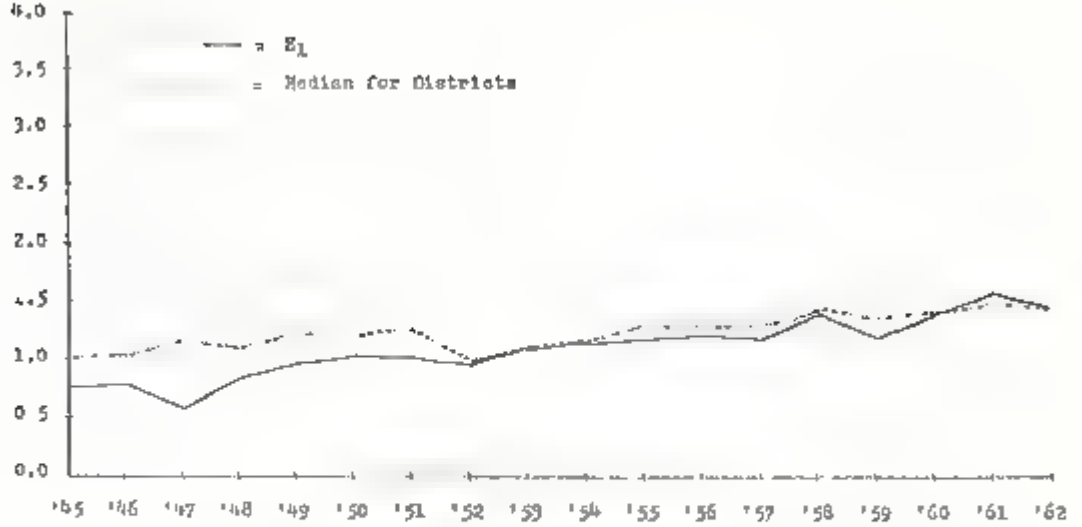


Figure 8

Local Financial Effort in Covington

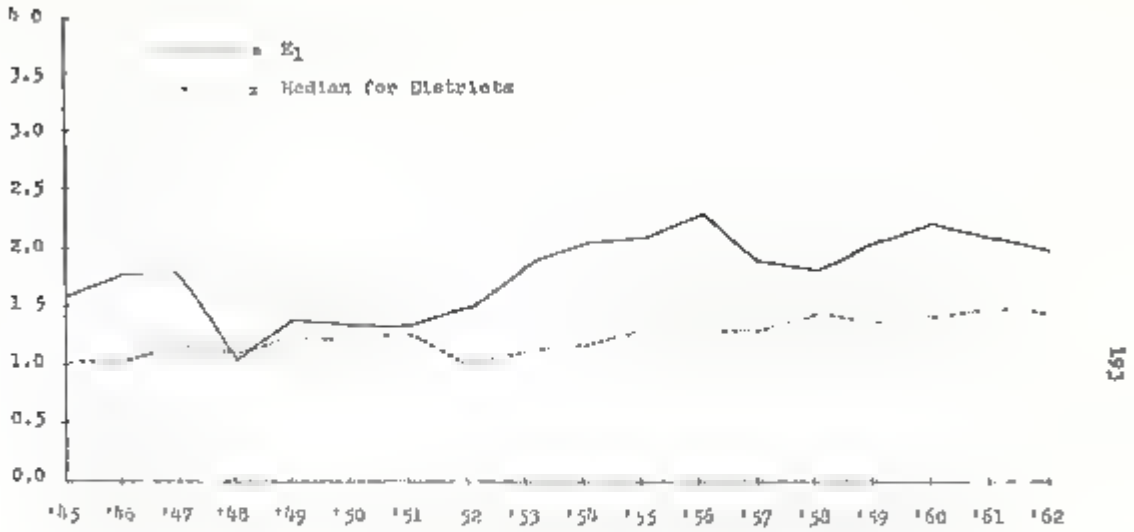


Figure 9

Local Financial Effort in Daviess

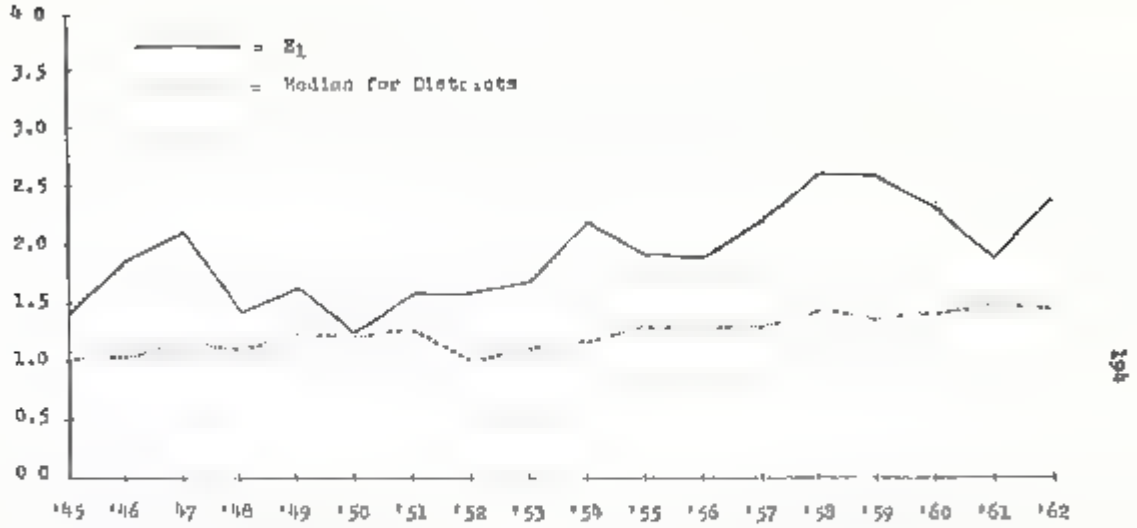


Figure 10

Local Financial Effort in Fayette

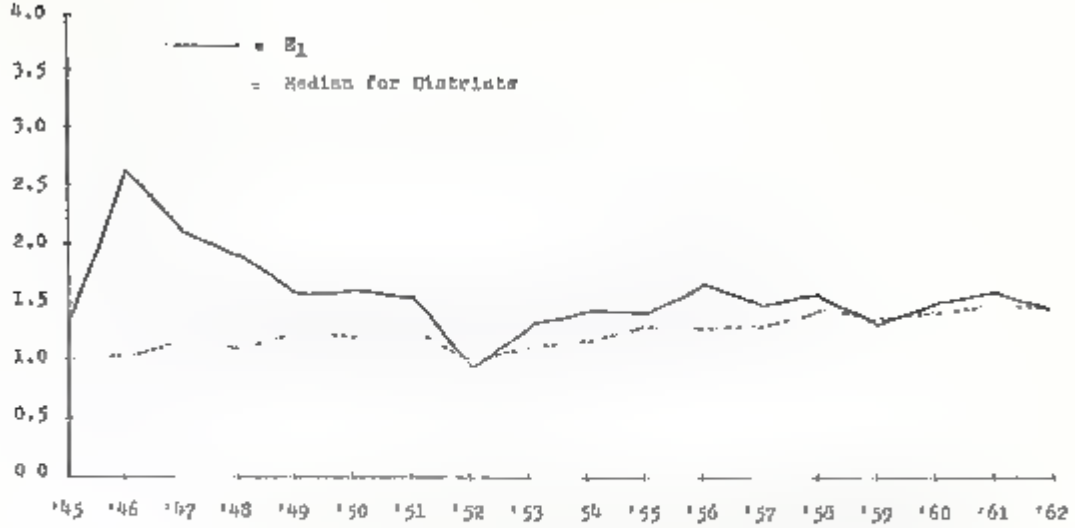


Figure 11

Local Financial Effort in Floyd

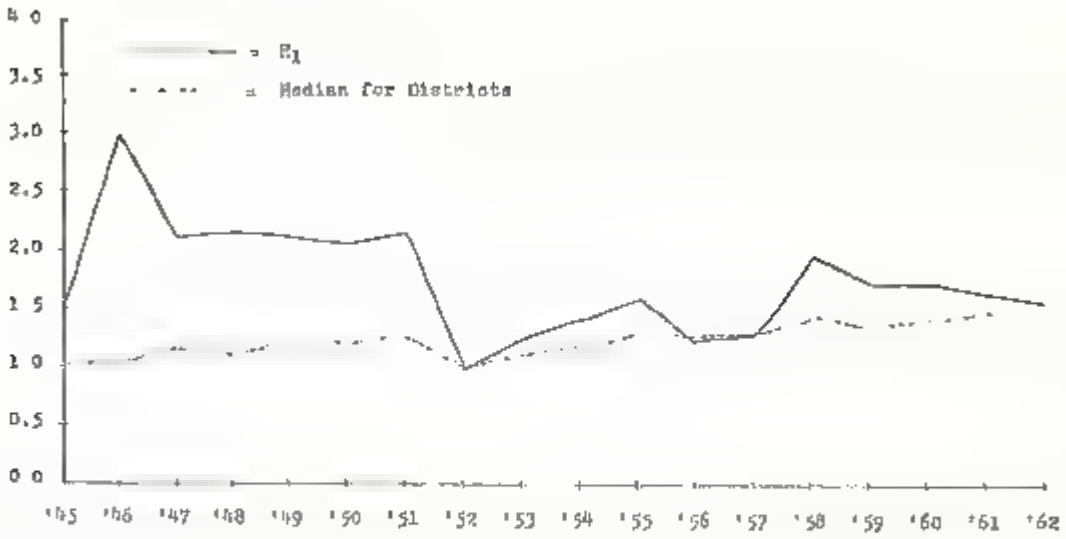


Figure 12

Effort Financial Effort in Grossup

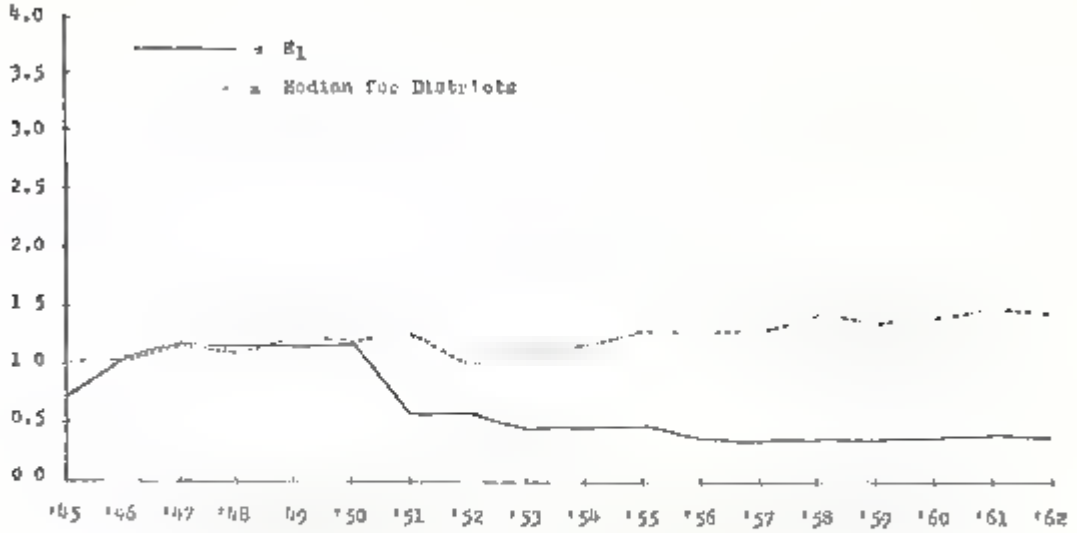


Figure 13

Local Financial Effort 1: Hardin

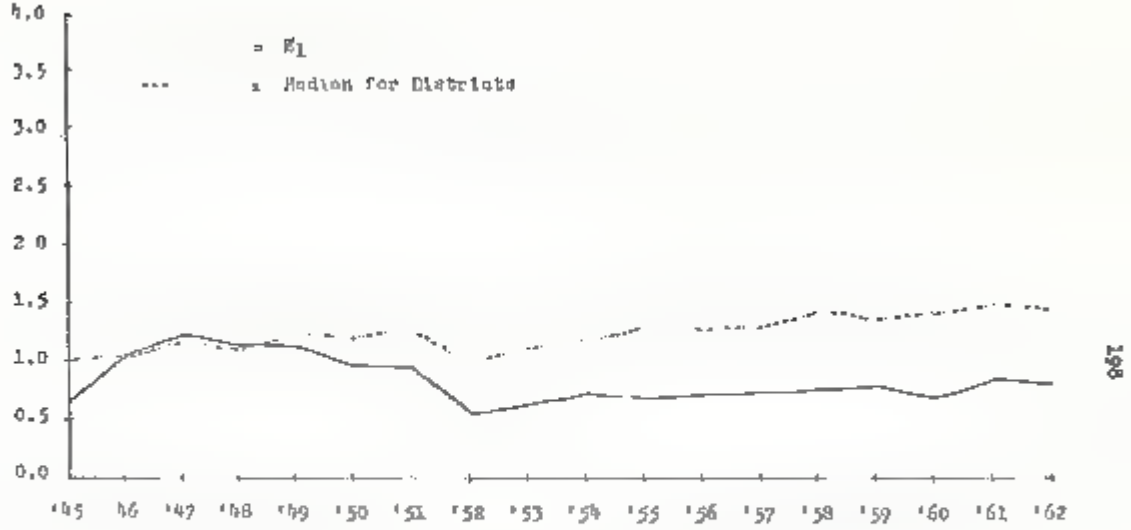


Figure 14

Local Financial Effort in Harlan

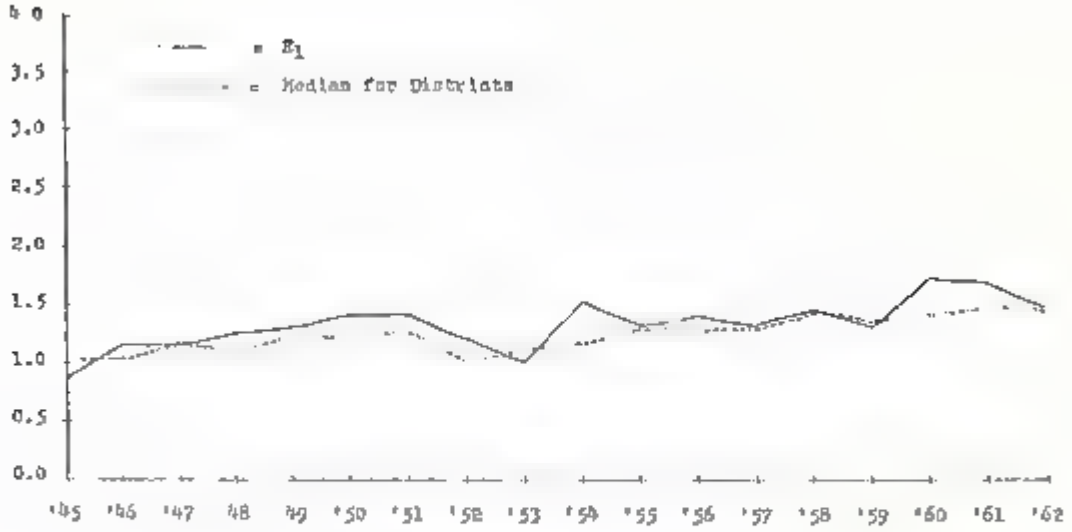


Figure 15

Local Financial Effo t in Hopkins

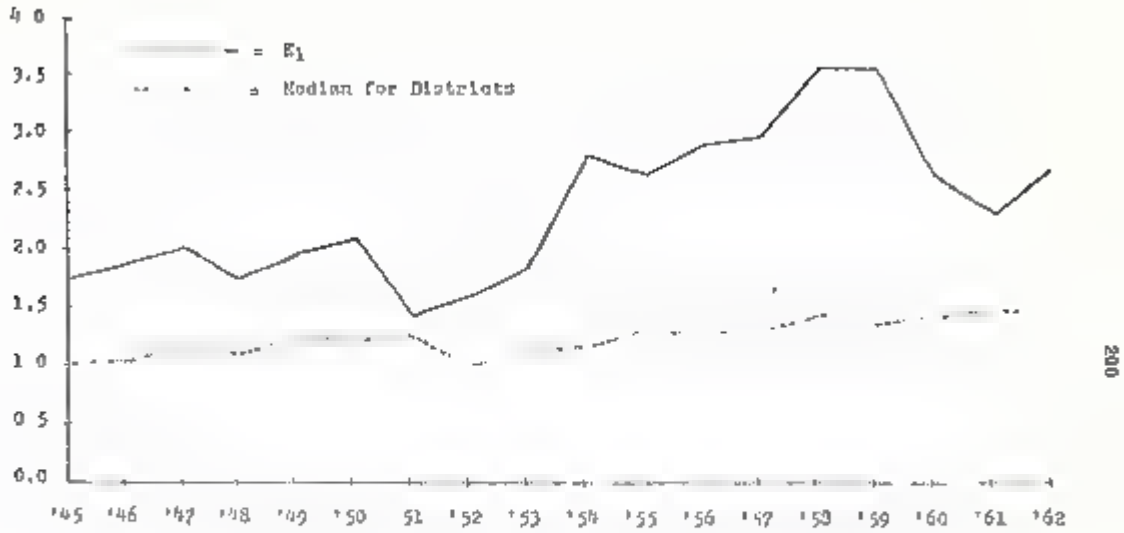


Figure 16

Local Financial Effort in Jefferson

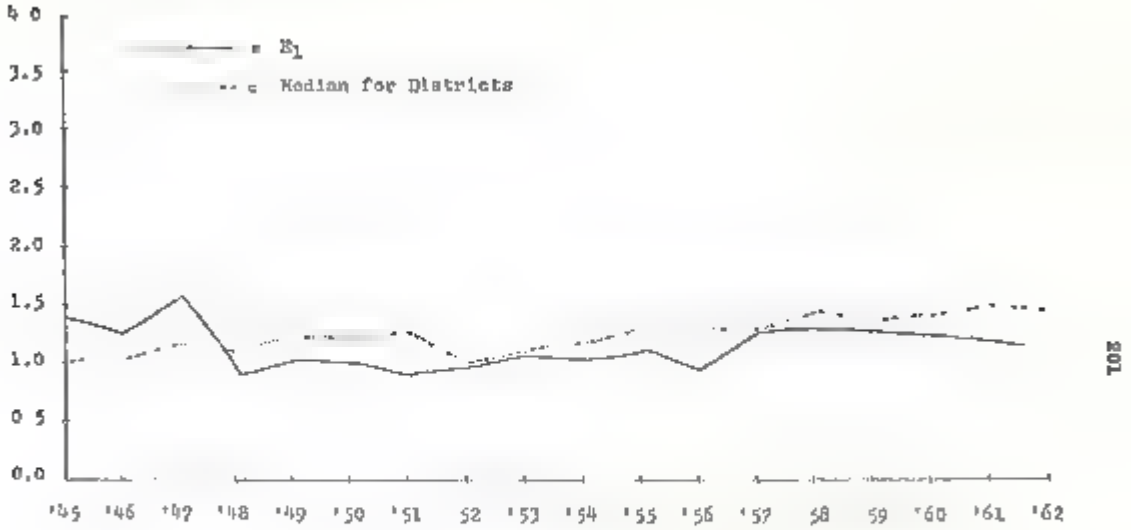


Figure 17

Local Financial Effort in Kenton

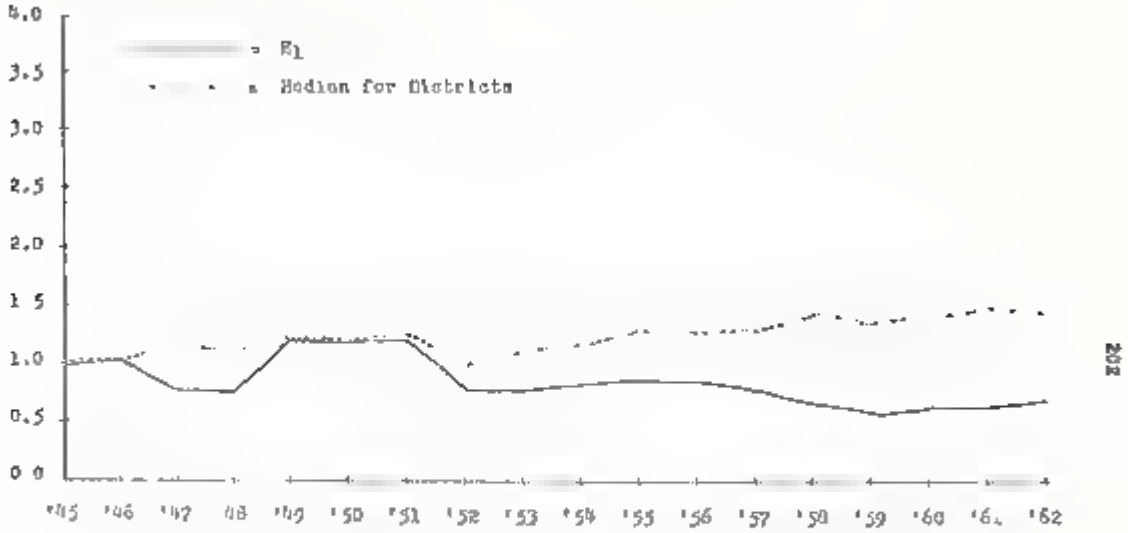


Figure 18

Local Financial Effort in Knox

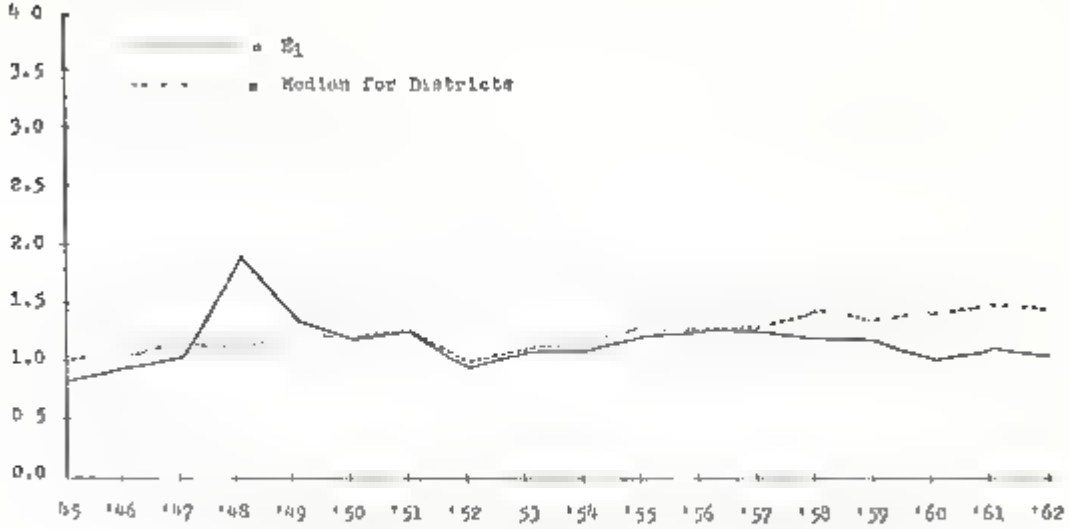


Figure 19

Local Financial Effort in Letcher

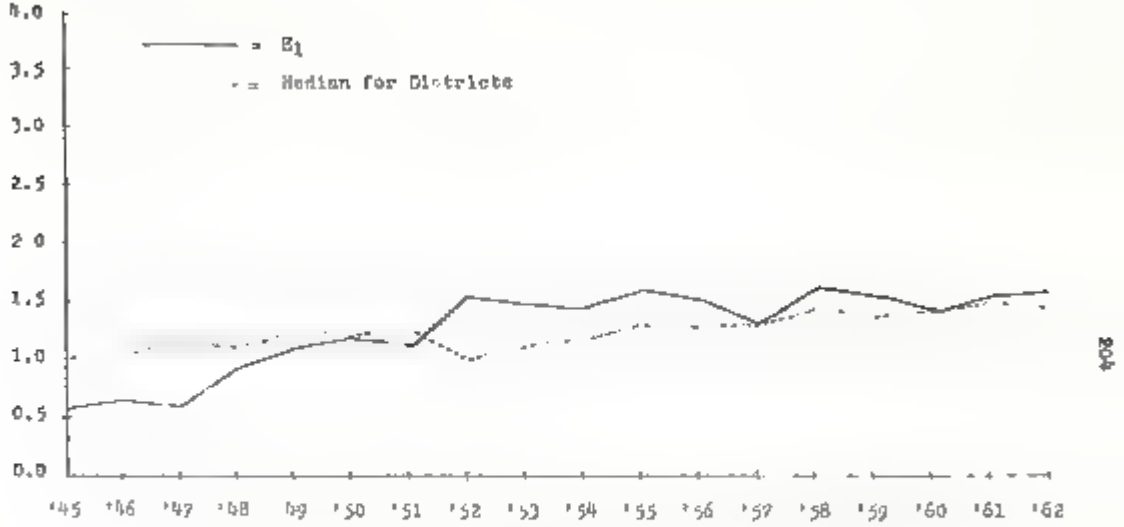


Figure 20

Local Financial Effort in Lexington

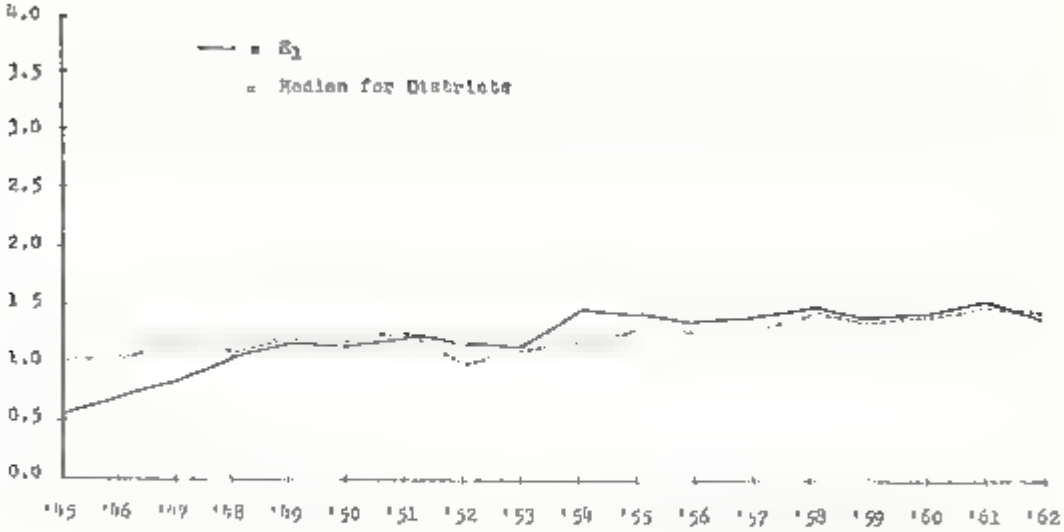


Figure 21

Lo l Financial Effort in Louisville

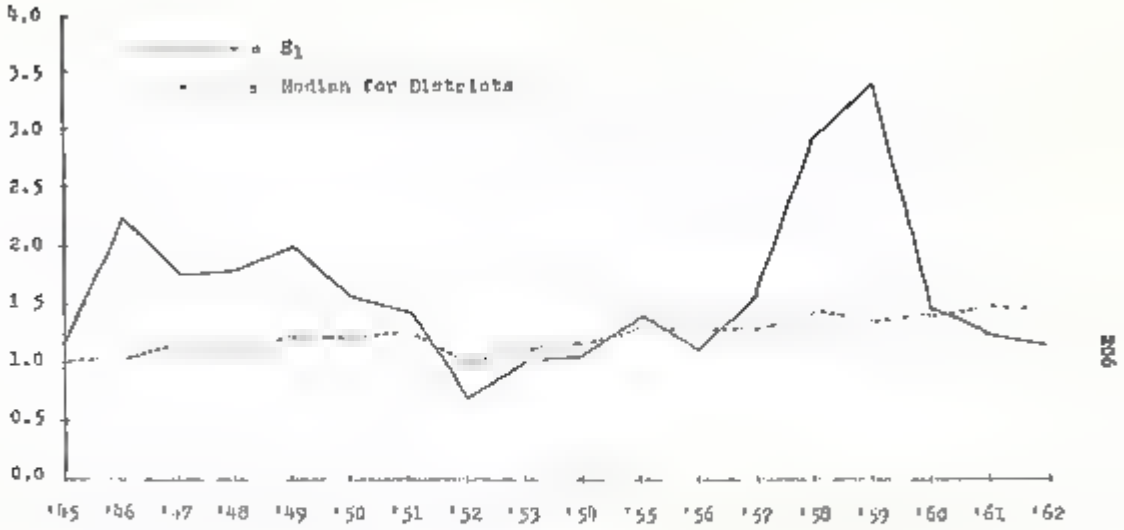


Figure 22

Local Financial Effort in McCracken

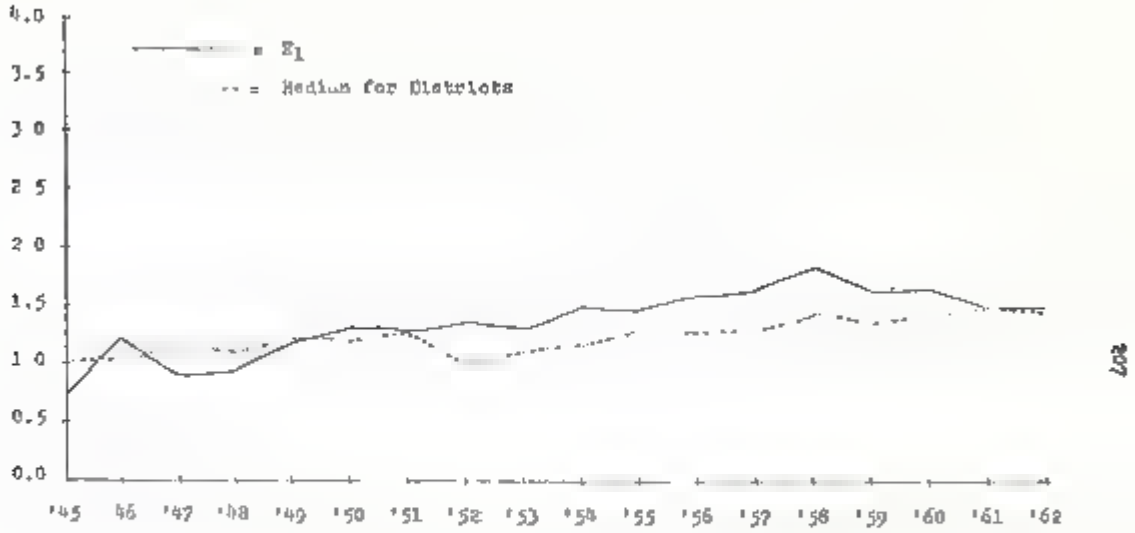


Figure 23

Local Financial Effort in Switzerland

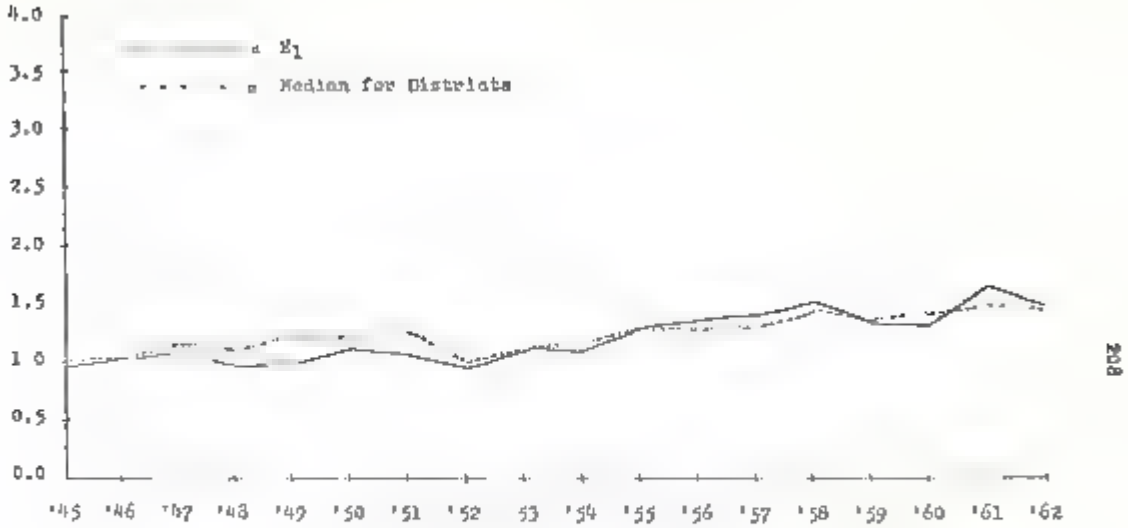


Figure 29

Loc. : Financial Effort in export

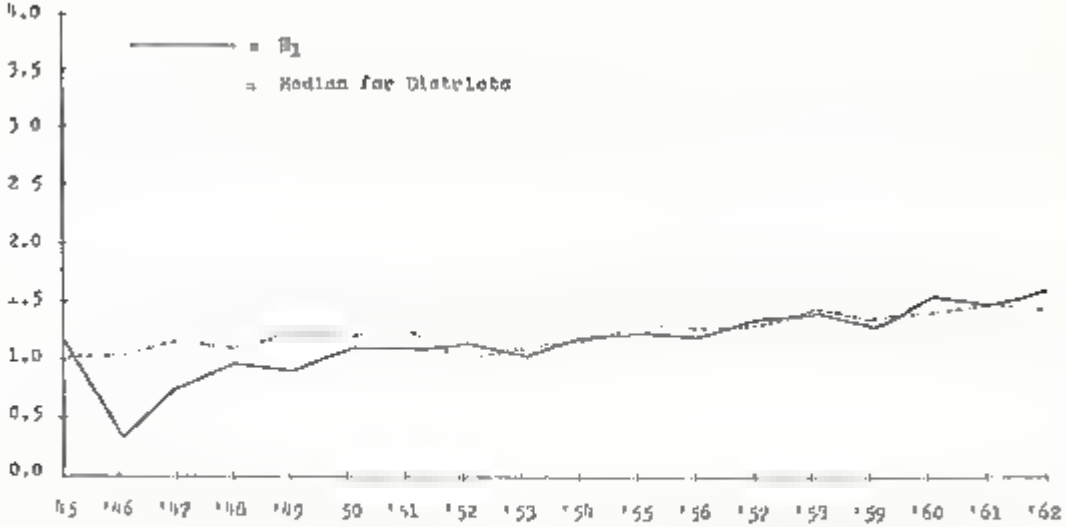


Figure 25

Local Financial Effort in Owensboro

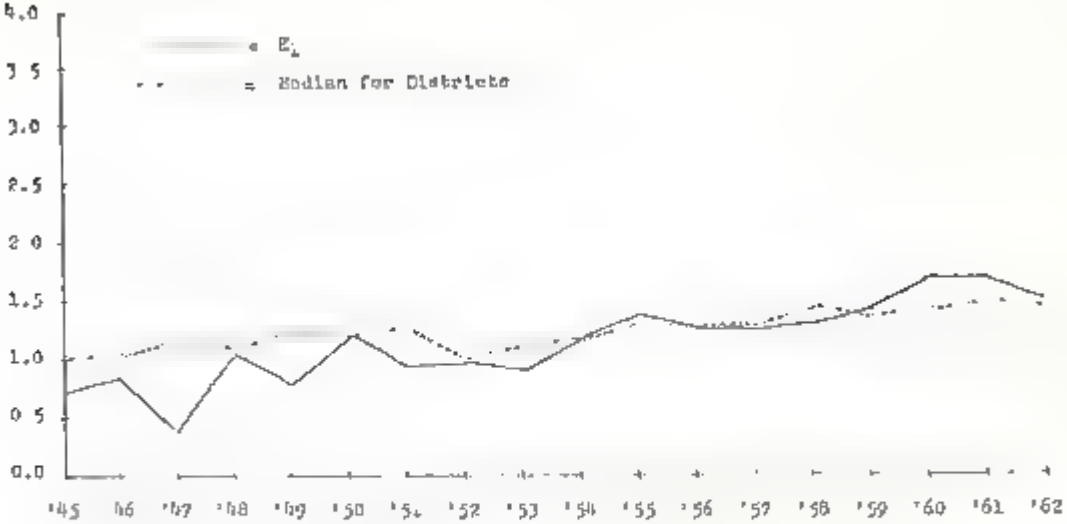


Figure 26

Local Financial Effort in Paducah

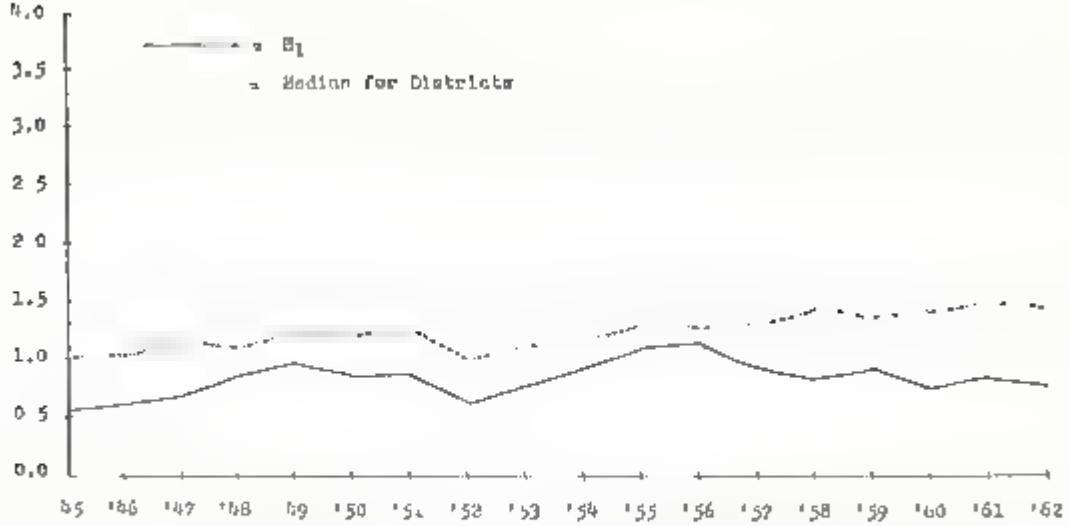


Figure 27

Local Financial Effort in Perry

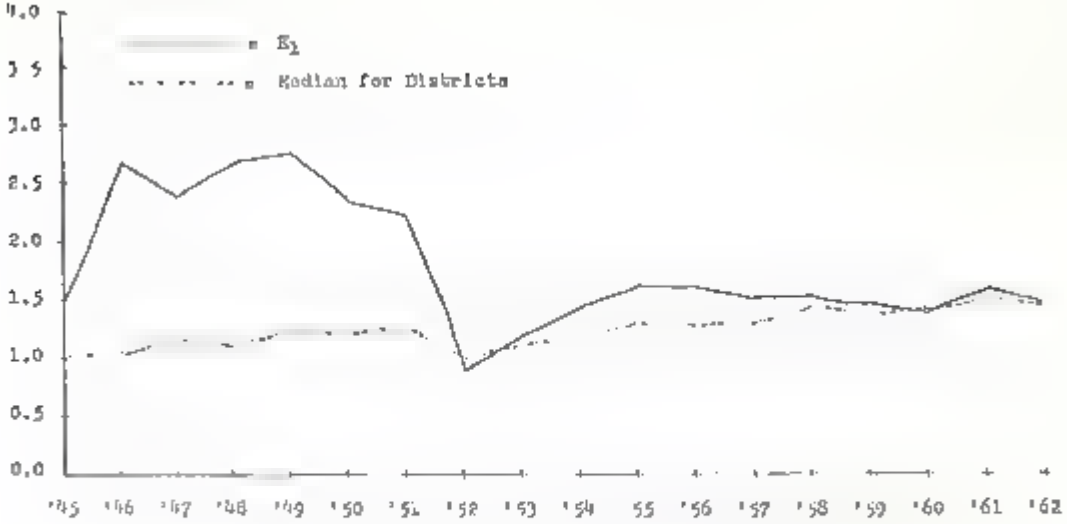


Figure 28

Local Financial Effort in Fiue

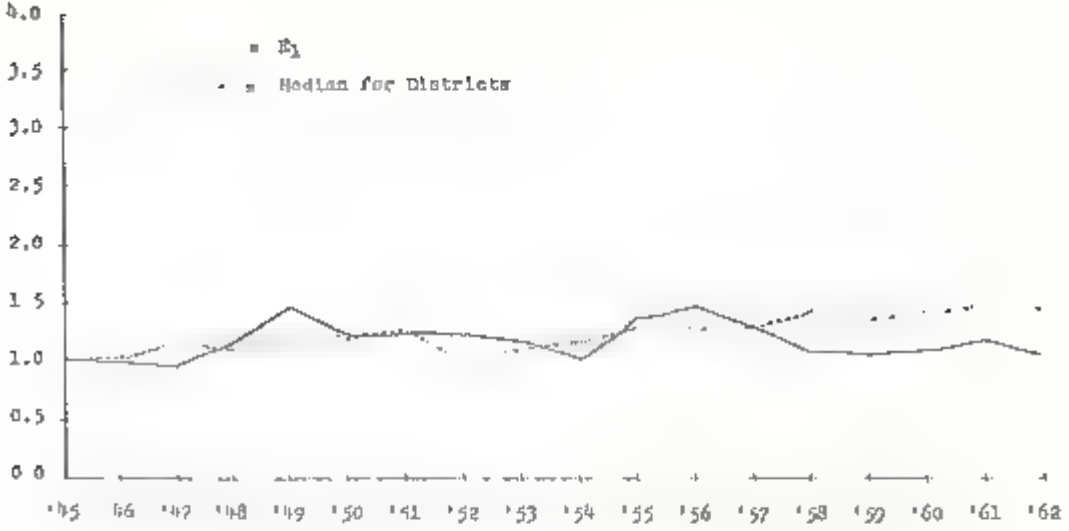


Figure 29

Local Image of Effects in Fig. 1

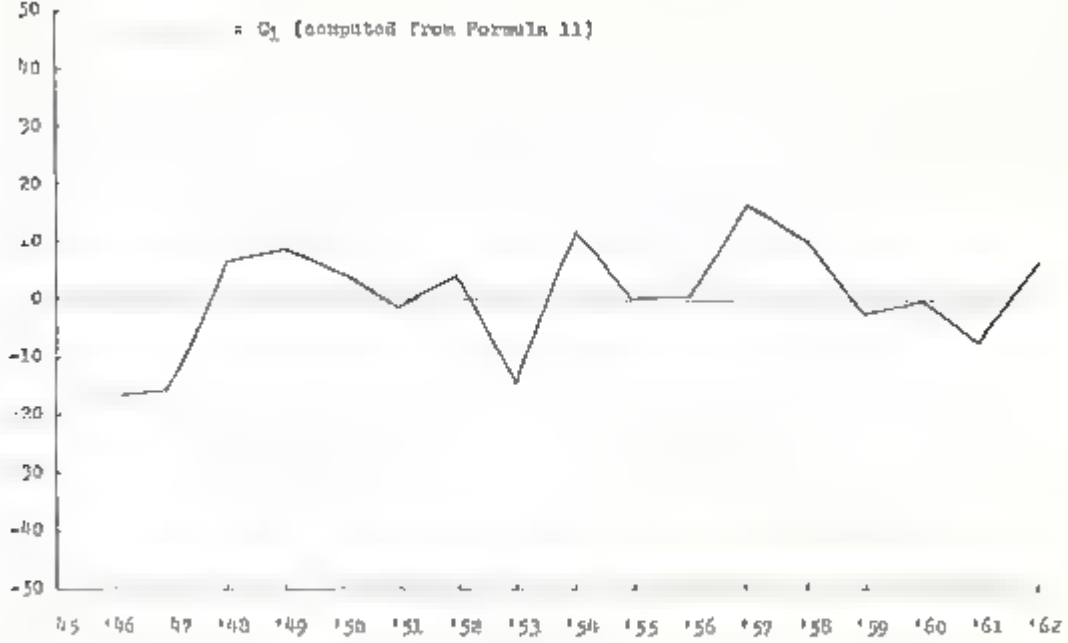


Figure 30

Elasticity of Demand in Owensboro, 1946-1962

Figure 31

Elasticity of Demand in Greece, 1945-1962

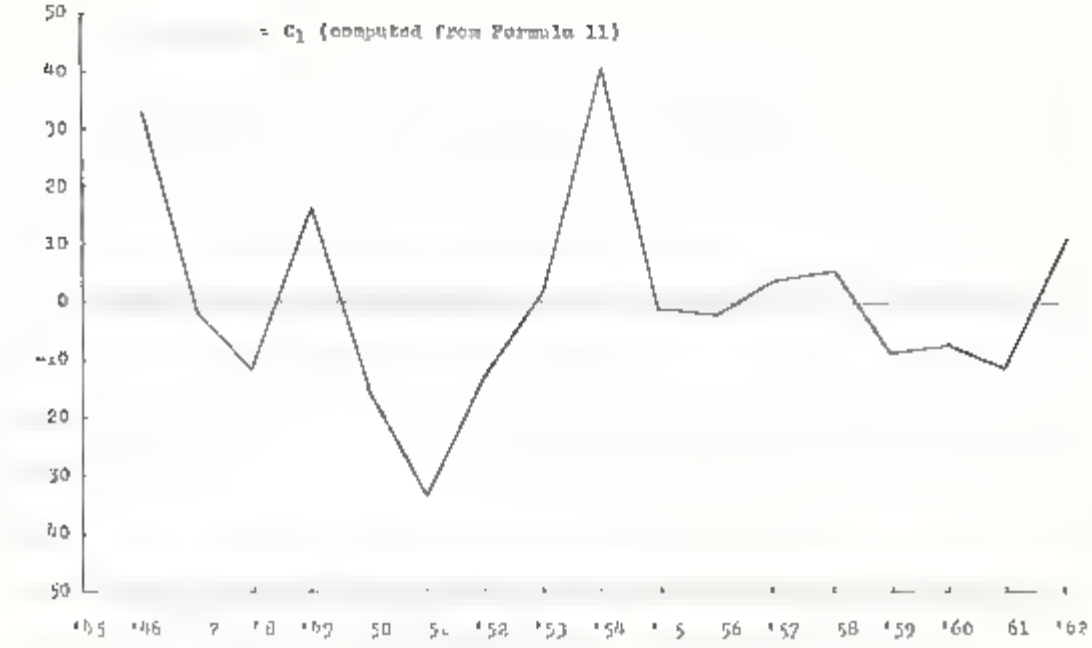
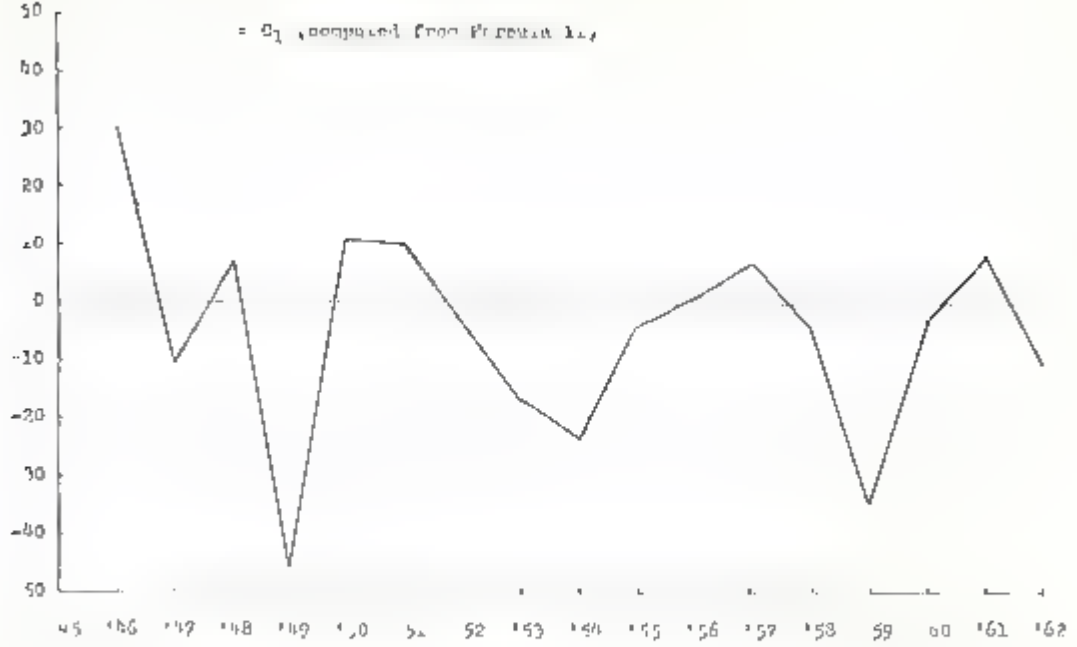


Figure 32

Elasticity of Demand in Jefferson, 1946-1962


50
40
30
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10
0
-10
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-40
-50
45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

Figure 33

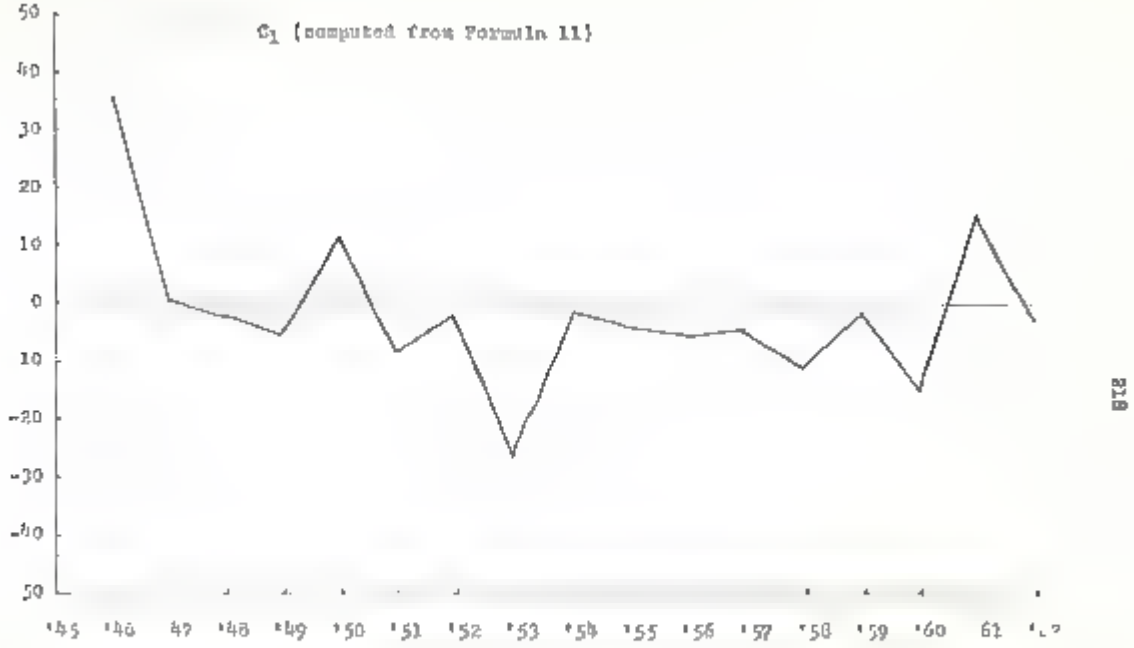

Figure 34

Elasticity of Demand in Nardini 1945-1962

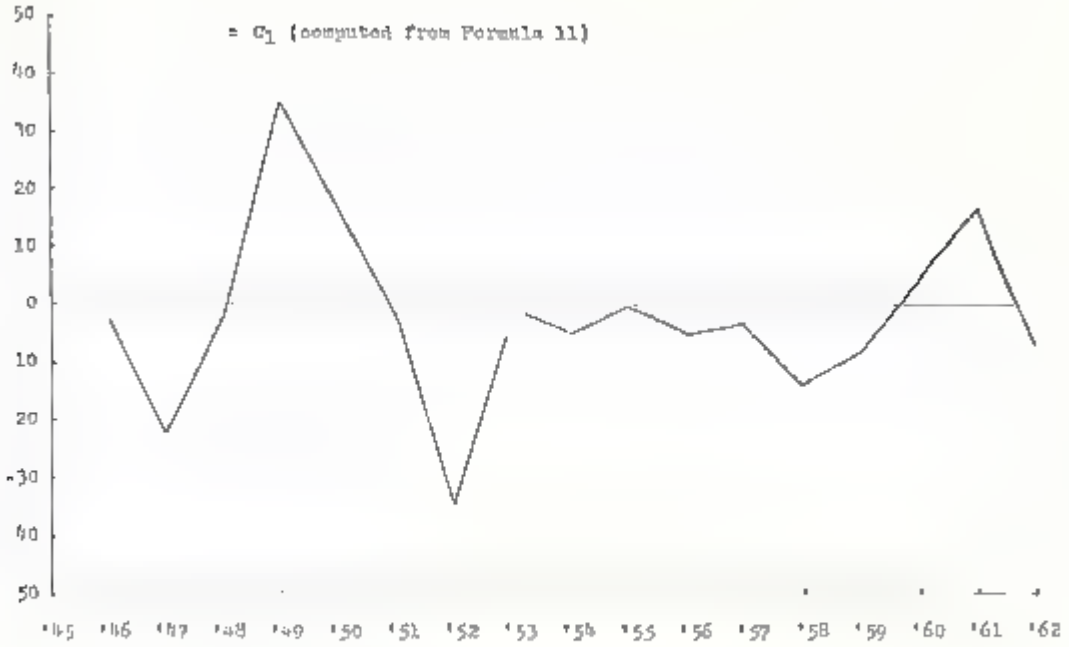

Figure 35

Elasticity of Demand in Knox: 1946-1962

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BIOGRAPHICAL SKETCH

Perry Ronald Adams was born September 16, 1921, at Parkersberg, West Virginia. In June 1939, he was graduated from Parkersberg High School. In August, 1943, he received the degree of Bachelor of Arts from the University of Kentucky. From 1943 until 1946, Mr. Adams served in the United States Navy in all theaters of war. Following his release from active duty, he returned to the University of Kentucky and received the degree of Bachelor of Arts in Music in 1947 and the Master of Arts in Education in 1948. From 1948 until 1953, Mr. Adams worked as an instructor in the Music Department and as Director of Music of the University School, University of Kentucky. From 1953 until 1963, he was employed as Director of Music of P. K. Yonge Laboratory School, University of Florida. In 1963, he was awarded a Kellogg Fellowship in Junior College Administration and in 1964 a Research Assistantship in the Department of Educational Administration, University of Florida. From September 1963 until the present time, he has pursued his work toward the degree of Doctor of Education.

Perry Ronald Adams is married to the former Ann Mallory Gillespie and is the father of two children. He is an officer in the Naval Reserve and is a member of the Music Education National Conference, the Florida Music Education Association, the Florida Vocal Association, the Florida Orchestra Association, the National Education Association, The Florida Education Association, Phi Mu Alpha, Kappa Delta Phi, and Phi Delta Kappa.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Education and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

August, 1965

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